WWW.PNY.COM/GV100

NVIDIA Quadro GV100

From stunning industrial design to advanced special effects to complex scientific visualization, and the frontiers of AI and Deep Learning, Quadro is the world's preeminent visual computing platform. Only Quadro has the most advanced ecosystem of hardware, software and tools to transform the disruptive challenges of today into the business successes of tomorrow – and the new Quadro GV100 exemplifies this trend.

VOLTA GPU ARCHITECTURE

Based on state-of-the-art 12nm FFN (FinFET NVIDIA) high-performance manufacturing process customized for NVIDIA to deliver 5120 CUDA cores, the Quadro GV100 GPU is the most powerful computing platform for AI, HPC, graphics, rendering and VR workloads on professional desktops. It includes 21.1 billion transistors on die size of 815 mm². Able to deliver more than 7.4 TFLOPS of double precision (FP64), 14.8 TFLOPS of single-precision (FP32), 29.6 TFLOPS of half-precision (FP16), 59.3 TOPS of integer-precision (INT8), and 118.5 TFLOPs of tensor operation performance, it supports a wide range of compute-intensive workloads flawlessly.

TENSOR CORES

New mixed-precision cores purpose-built for deep learning matrix arithmetic, delivers 8x TFLOPS for training, compared to the previous generation. Quadro GV100 utilizes 640 Tensor Cores; each Tensor Core performs 64 floating point fused multiply-add (FMA) operations per clock, and each SM performs a total of 1024 individual floating point operations per clock.

HIGH SPEED HBM2 MEMORY

Built with Volta's vastly optimized 32GB HBM2 memory subsystem for the industry's fastest graphics memory (870 GB/s peak bandwidth), Quadro GV100 is the ideal platform for latency-sensitive applications handling large datasets. Quadro GV100 offers 2x memory capacity and delivers 20% more memory bandwidth compared to the previous generation. HBM2 also provides native support for Error Correcting Code (ECC) without capacity or performance penalties.
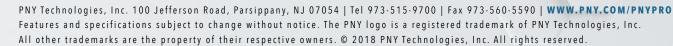
MIXED-PRECISION COMPUTING

Double the throughput and reduce storage requirements with 16-bit floating point precision computing to enable the training and deployment of more sophisticated neural networks. With independent parallel integer and floating point data paths, the Volta SM (Streaming Multiprocesssor) is also much more efficient on workloads with a mix of computation and addressing calculations.

To learn more about the NVIDIA Quadro GV100, email **GOPNY@PNY.COM**

REINVENTING THE WORKSTATION FOR AI
NVIDIA QUADRO GV100

The Power To Accelerate AI-Enhanced Workflows

The NVIDIA® Quadro® GV100 reinvents the workstation to meet the demands of AI-enhanced design and visualization workflows. It's powered by NVIDIA Volta, delivering extreme memory capacity, scalability, and performance that designers, architects, and scientists need to create, build, and solve the impossible.

Supercharge Rendering with AI
> Work with full fidelity, massive datasets
> Enjoy fluid visual interactivity with AI-accelerated denoising

Bring Optimal Designs to Market Faster
> Work with higher fidelity CAE simulation models
> Explore more design options with faster solver performance

Enjoy Ultimate Immersive Experiences
> Work with complex, photoreal datasets in VR
> Enjoy optimal NVIDIA Holodeck experience

Realize New Opportunities with AI
> Access DL frameworks for AI development via NVIDIA NGC
> Accelerate AI training/inferencing with Tensor Cores and NVLink

All Quadro cards are certified with a broad range of professional applications, tested by leading workstation manufacturers, and backed by a global team of support specialists to give you the peace of mind to focus on doing your best work.

To learn more about the NVIDIA Quadro GV100 visit
www.pny.com/quadro

FEATURES

> Four DisplayPort 1.4 Connectors[3]
> DisplayPort with Audio
> 3D Stereo Support with Stereo Connector[3]
> NVIDIA GPUDirect™ Support
> NVIDIA NVLink Support[1]
> Quadro Sync II[4] Compatibility
> NVIDIA nView® Desktop Management Software
> HDCP 2.2 Support
> NVIDIA Mosaic[5]

PACKAGE CONTENTS

> NVIDIA Quadro GV100
> Quick Start Guide
> Quadro Support Guide
> 4 DisplayPort to DVI Adapters
> 1 DisplayPort to HDMI Adapter
> 1 Stereo Connector Bracket
> 1 Auxiliary Power Cable (8-pin to dual 6-pin adapter)

WARRANTY AND SUPPORT

> 3-Year Warranty
> Pre- and Post-Sales Technical Support
> Dedicated Field Application Engineers
> Direct Tech Support Hot Lines

PNY PART NUMBER	VCQGV100-PB
SPECIFICATIONS	
GPU Memory	**32 GB HBM2**
Memory Interface	**4096-bit**
Memory Bandwidth	**Up to 870 GB/s**
ECC	**Yes**
NVIDIA CUDA Cores	**5,120**
NVIDIA Tensor Cores	**640**
Double-Precision Performance	**7.4 TFLOPS**
Single-Precision Performance	**14.8 TFLOPS**
Tensor Performance	**118.5 TFLOPS**
NVIDIA NVLink	**Connects 2 Quadro GV100 GPUs[2]**
NVIDIA NVLink bandwidth	**200 GB/s**
System Interface	**PCI Express 3.0 x 16**
Max Power Consumption	**250 W**
Thermal Solution	**Active**
Form Factor	**4.4" H x 10.5" L, Dual Slot, Full Height**
Display Connectors	**4x DP 1.4**
Max Simultaneous Displays	**4 direct, DP 1.4**
Display Resolution	**4x 4096x2160 @ 120 Hz 4x 5120x2880 @ 60 Hz 2x 7680x4320 @ 60 Hz**
VR Ready	**Yes**
Graphics APIs	**Shader Model 5.1, OpenGL 4.5[6], DirectX 12.0[7], Vulkan 1.0[6]**
Compute APIs	**CUDA, DirectCompute, OpenCL™**

NVIDIA QUADRO
AUTHORIZED PARTNER
PNY®

PNY Technologies, Inc.
100 Jefferson Road, Parsippany, NJ 07054
Tel 408 567 5500 | Fax 408 855 0680

For more information visit: **www.pny.com/quadro**