

NVIDIA Quadro P1000

GP107

GRAPHICS PROCESSOR

640

CORES

40

TMUS

32

ROPS

4096 MB

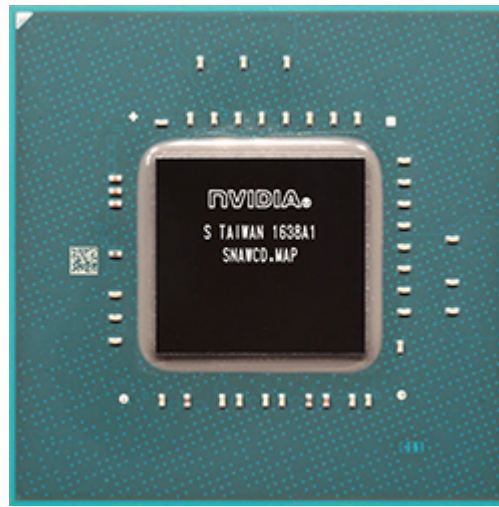
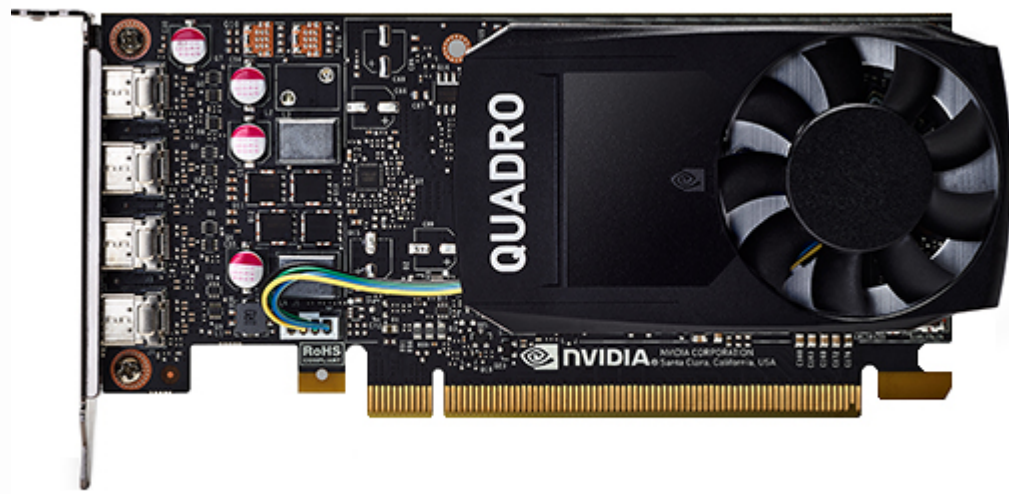
MEMORY SIZE

GDDR5

MEMORY TYPE

128 bit

BUS WIDTH



The Quadro P1000 is a professional graphics card by NVIDIA, launched in February 2017. Built on the 14 nm process, and based on the GP107 graphics processor, the card supports DirectX 12.0. The GP107 graphics processor is an average sized chip with a die area of 132 mm² and 3,300 million transistors. Unlike the fully unlocked GeForce GTX 1050 Ti, which uses the same GPU but has all 768 shaders enabled, NVIDIA has disabled some shading units on the Quadro P1000 to reach the product's target shader count. It features 640 shading units, 40 texture mapping units and 32 ROPs. NVIDIA has placed 4,096 MB GDDR5 memory on the card, which are connected using a 128-bit memory interface. The GPU is operating at a frequency of 1354 MHz, which can be boosted up to 1455 MHz, memory is running at 1752 MHz.

We recommend the NVIDIA Quadro P1000 for gaming with highest details at resolutions up to, and including, 2560x1440.

Being a single-slot card, the NVIDIA Quadro P1000 does not require any additional power connector, its power draw is rated at 47 W maximum. Display outputs include: 4x mini-DisplayPort. Quadro P1000 is connected to the rest of the system using a PCIe 3.0 x16 interface. The card measures 145 mm in length, and features a single-slot cooling solution.

Graphics Processor

GPU Name: GP107**Architecture:** Pascal**Process Size:** 14 nm**Transistors:** 3,300 million**Die Size:** 132 mm²

Graphics Card

Released: Feb 7th, 2017**Production Status:** Active**Bus Interface:** PCIe 3.0 x16

Clock Speeds

GPU Clock: 1354 MHz**Boost Clock:** 1455 MHz**Memory Clock:** 1752 MHz
7008 MHz effective

Memory

Memory Size: 4096 MB**Memory Type:** GDDR5**Memory Bus:** 128 bit**Bandwidth:** 112.1 GB/s

Graphics Features

DirectX: 12.0**OpenGL:** 4.5**OpenCL:** 1.2**CUDA:** 6.1**Shader Model:** 5.0

Relative Performance

GeForce 210	4%
GeForce 9400 GT	6%
Radeon HD 4550	7%
Radeon HD 5450	9%
Radeon HD 6450	10%
GeForce GT 520	11%
GeForce GT 220	13%
GeForce GT 430	17%
Radeon HD 5570	18%
Radeon HD 4670	19%
GeForce GT 440	20%

Based on TPU review data: "Performance Summary" at 1920x1080
Quadro P1000 performance estimated based on architecture, shader count and clocks.

Render Config

Shading Units: 640**TMUs:** 40**ROPs:** 32**SM Count:** 5**Pixel Rate:** 43.3 GPixel/s**Texture Rate:** 54.2 GTexel/s**Floating-point performance:** 1,733.1 GFLOPS

Board Design

Slot Width: Single-slot**Length:** 5.7 inches
145 mm**TDP:** 47 W**Outputs:** 4x mini-DisplayPort**Power Connectors:** None