Performance Driven Meshify S2

NVIDIA GeForce GTX 1050

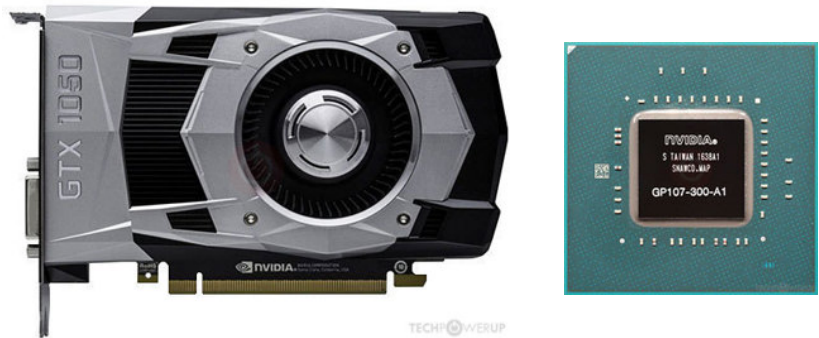| GP107	640	40	32	2 GB	GDDR5	128 bit
GRAPHICS PROCESSOR	CORES	TMUS	ROPS	MEMORY SIZE	MEMORY TYPE	BUS WIDTH

Recommended Resolutions:

☐ 640x480   ☐ 1280x720   ☐ 1366x768   ☐ 1600x900   ☐ 1920x1080   ☐ 2560x1440   ☐ 3840x2160

The GeForce GTX 1050 is a mid-range graphics card by NVIDIA, launched in October 2016. Built on the 14 nm process, and based on the GP107 graphics processor, in its GP107-300-A1 variant, 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 GeForce GTX 1050 to reach the product's target shader count. It features 640 shading units, 40 texture mapping units and 32 ROPs. NVIDIA has placed 2,048 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.

Being a dual-slot card, the NVIDIA GeForce GTX 1050 does not require any additional power connector, its power draw is rated at 75 W maximum. Display outputs include: 1x DVI, 1x HDMI, 1x DisplayPort. GeForce GTX 1050 is connected to the rest of the system using a PCI-Express 3.0 x16 interface. The card measures 145 mm in length, and features a dual-slot cooling solution. Its price at launch was 109 US Dollars.

Graphics Processor

GPU Name:	GP107
GPU Variant:	GP107-300-A1
Architecture:	Pascal
Foundry:	Samsung
Process Size:	14 nm
Transistors:	3,300 million
Die Size:	132 mm²

Memory

Memory Size:	2 GB
Memory Type:	GDDR5
Memory Bus:	128 bit
Bandwidth:	112.1 GB/s

Graphics Features

DirectX:	12.0 (12_1)
OpenGL:	4.6

Graphics Card

Release Date:	Oct 25th, 2016
Generation:	GeForce 1000
Production:	Active
Launch Price:	109 USD
Bus Interface:	PCIe 3.0 x16

Clock Speeds

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

Board Design

Slot Width:	Dual-slot
Length:	5.7 inches 145 mm
TDP:	75 W
Outputs:	1x DVI 1x HDMI

Relative Performance

GeForce GTX 1050	100%
Radeon R9 380	
Radeon R9 285	120%
	121%
Radeon HD 7970	
GeForce GTX 680	122%
	125%
GeForce GTX 1050 Ti	
GeForce GTX 770	128%
	131%
Radeon HD 6990	

Based on TPU review data: "Performance Summary" at 1920x1080

Render Config

Shading Units:	640
TMUs:	40
ROPs:	32
SM Count:	5

Theoretical Performance

Pixel Rate:	46.56 GPixel/s
Texture Rate:	58.20 GTexel/s
FP16 (half) performance:	29.10 GFLOPS (1:64)
FP32 (float) performance:	1,862 GFLOPS
FP64 (double) performance:	58.20 GFLOPS (1:32)

OpenCL:	1.2	
Vulkan:	1.1.96	
CUDA:	6.1	
Shader Model:	6.2	

	1x DisplayPort
Power Connectors:	None
Board Number:	PG210 SKU 1

GP107 GPU Notes

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Codename: NV137
PureVideo HD: VP8
VDPAU: Feature Set H
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Retail boards based on this design (141)

▼Name	GPU Clock	Boost Clock	Memory Clock	Other Changes
AFOX GTX 1050	1354 MHz	1455 MHz	1752 MHz	
ASL GTX 1050 Skynet	1354 MHz	1455 MHz	1752 MHz	8.27 inches/210 mm
ASL GTX 1050 Skynet	1354 MHz	1455 MHz	1752 MHz	8.27 inches/210 mm
ASL GTX 1050 Skynet Battle Flag	1354 MHz	1455 MHz	1752 MHz	
ASL GTX 1050 Soar Dragon	1354 MHz	1455 MHz	1752 MHz	8.27 inches/210 mm
ASL GTX 1050 Wolverine	1354 MHz	1455 MHz	1752 MHz	8.27 inches/210 mm
ASUS CERBERES GTX 1050 Advanced	1366 MHz	1468 MHz	1752 MHz	8 inches/203 mm
ASUS CERBERUS GTX 1050 OC	1404 MHz	1518 MHz	1752 MHz	8 inches/203 mm
ASUS DUAL GTX 1050	1354 MHz	1455 MHz	1752 MHz	8.3 inches/211 mm
ASUS DUAL GTX 1050 OC	1405 MHz	1518 MHz	1752 MHz	8.3 inches/211 mm
ASUS DUAL GTX 1050 OC V2	1404 MHz	1518 MHz	1752 MHz	8 inches/203 mm
ASUS EXPEDITION GTX 1050	1354 MHz	1455 MHz	1752 MHz	8.3 inches/211 mm
ASUS EXPEDITION GTX 1050 OC	1405 MHz	1518 MHz	1752 MHz	8.3 inches/211 mm
ASUS PHOENIX GTX 1050	1354 MHz	1455 MHz	1752 MHz	7.5 inches/191 mm
ASUS ROG STRIX GTX 1050 GAMING	1354 MHz	1455 MHz	1752 MHz	9.5 inches/241 mm, 2x DVI 1x HDMI 1x DisplayPort
ASUS ROG STRIX GTX 1050 GAMING OC	1442 MHz	1556 MHz	1752 MHz	9.5 inches/241 mm, 2x DVI 1x HDMI 1x DisplayPort
Axigon GTX 1050 Raptor	1366 MHz	1468 MHz	1752 MHz	
BIOSTAR GTX 1050	1354 MHz	1455 MHz	1752 MHz	
BIOSTAR GTX 1050 Dual Cooling	1354 MHz	1455 MHz	1752 MHz	
BIOSTAR GTX 1050 Tank-Cooling	1354 MHz	1455 MHz	1752 MHz	
Colorful GTX 1050 GAMING	1354 MHz	1455 MHz	1752 MHz	
Colorful GTX 1050 GAMING V2	1354 MHz	1455 MHz	1752 MHz	
Colorful GTX 1050 GAMING V3	1354 MHz	1455 MHz	1752 MHz	
Colorful GTX 1050 GAMING V4	1354 MHz	1455 MHz	1752 MHz	
Colorful GTX 1050 GAMING V5	1354 MHz	1455 MHz	1752 MHz	
Colorful GTX 1050 Low Profile	1354 MHz	1455 MHz	1752 MHz	