

Custom Gaming Computer Assignment

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What PC Parts Would I Have If I Have A Budget Of \$1000



In a situation where I am building the Gaming setup of my dreams, however only having a budget of \$1,000 and not being able to go over \$1,100, then all the listed items computer parts below will be the ones I buy.

CPU

Intel Core i3-10100F Comet Lake 3.6GHZ Processor



Price: \$105.78

Technological Features

Process Technology - 14 nm

Clock Speed - 3.60 GHz

Processor Socket - Socket LGA-1200

L3 Cache - 6 MB

Processor Core - Quad-core (4 Core)

64-bit Processing - Yes

Processor Manufacturer - Intel

Overclocking Speed - 4.30 GHz

Processor Generation - 10th Gen

Processor Threads - 8

Motherboard

**ASRock H510M-HVS LGA 1200 Intel H510
SATA 6Gb/s Micro ATX Intel Motherboard**



Price: \$89.99

Technological Features

- Supports 10th Gen Intel Core Processors and 11th Gen Intel Core Processors
- Supports DDR4 3200MHz (OC)
- 1 x PCIe 4.0 x16, 1 x PCIe 3.0 x1
- Graphics Output Options: HDMI and D-Sub
- 7.1 CH HD Audio (Realtek ALC897 Audio Codec)
- 4 SATA 3
- 4 x USB 3.2 Gen1 (2 x Rear and 2 x Front)
- Realtek Gigabit LAN

Memory

**Corsair Vengeance LPX 16GB (2x8GB) DDR4
DRAM 3200MHz C16 Desktop Memory Kit -
Black**



Price: \$87.99

Technological Features

- Hand-sorted memory chips ensure high performance with generous Overclocking headroom. SPD Speed-2133MHz
- Vengeance LPX is optimized for wide compatibility with the latest Intel and AMD DDR4 motherboards.
- A low-profile height of just 34mm ensures that vengeance LPX even fits in most small-form-factor builds.
- A high-performance PCB guarantees strong signal quality and stability for superior Overclocking ability.
- A solid aluminum heatspreader efficiently dissipates heat from each module so that they consistently run at high clock speeds.
- Supports Intel XMP 2.0 for simple one-setting installation and setup.
- Available in multiple colors to match the style of your system.

**Video Recommendation(Not Too Sure How To Input A
Video, Only Link)**

https://www.youtube.com/watch?v=-n3RLz_-BAg&ab_channel=The5Best

Storage

Kingston A400 240GB 2.5 SSD



Price: \$39.96

Technological Features

Device Type - Solid state drive - internal

Capacity - 240 GB

NAND Flash Memory Type - Triple-level cell (TLC)

Form Factor - 2.5"

Interface - SATA 6Gb/s

Features - Shock-resistant, vibration dampening

Width - 100mm

Depth - 69.9mm

Height - 7mm

Weight - 41g

Storage

**Seagate BarraCuda 2TB 3.5" Internal
Hard Drive - SATA 6.0Gb/s - 7200 rpm**



Price: \$60.50

Technological Features

Interface - SATA 6Gb/s

Form Factor - 3.5"

Features- Native Command Queuing (NCQ), Halogen Free, Seagate OptiCache technology, Seagate AcuTrac technology, Seagate SmartAlign technology, Hot-Plug Support, Worldwide Name (WWN), TGMR recording technology, S.M.A.R.T.

Width - 101.6 mm

Depth - 146.99 mm

Height - 20.17 mm

Weight - 415 g

Device Type - Hard drive - internal

Buffer Size - 256 MB

Capacity - 2 TB

Bytes per Sector - 4096

Video Card

ASUS GeForce GT 1030 Phoenix Fan OC Edition Video Card



Price: \$137.50

Technological Features

Graphics Engine - NVIDIA GeForce GT 1030

Bus Standard - PCI Express 3.0

OpenGL - OpenGL®4.5

Video Memory - GDDR5 2GB

Engine Clock - OC Mode - GPU Boost Clock : 1531 MHz , GPU Base Clock : 1278 MHz Gaming Mode (Default) - GPU Boost Clock : 1506 MHz , GPU Base Clock : 1252 MHz

CUDA Core- 384

Memory Clock - 6008 MHz

Memory Interface - 64-bit

Resolution - DVI Max Resolution : 1920x1200

Interface -	DVI Output :-	Yes x 1 (Native) (DVI-D)
	HDMI Output :-	Yes x 1 (Native)
	HDCP Support :-	Yes

Case

Deepcool E-Shield ATX Mid Tower Case



Price: \$54.99

Technological Features

Case Type - Mid Tower

Power Supply Type - ATX PS2

Expansion Slots - 7

Color - Black

Case Material - ABS, SPCC, Tempered Glass

Side Panel Window - Yes

Motherboard Support - eATX

Front Ports - 1×USB3.0/2×USB2.0/1×Audio(HD)/1×Mic

Cooling

Pre-installed: Rear: 1×120mm fan; Optional: Front: (Without CD-ROM installed) 3×120mm or 3×140mm; (With CD-ROM installed) 2×120mm or 2×140mm, Top: 2×120/140mm

External 5.25" Drive Bay - 1

Internal 2.5" Drive Bays - 4

Internal 3.5" Drive Bays - 2

Dimensions - 438 × 210 × 477mm

With Power Supply - No

Power Supply

**EVGA 600 BQ, 80+ BRONZE 600W, Semi
Modular ATX Power Supply**



Price: \$59.99

Technological Features

Model - 110-BQ-0600-K1

Weight - 5.00 lbs.

Warranty - 3 Years

Modular - Semi-Modular

Maximum Power - 600W

Energy Efficiency - 80 PLUS Bronze Certified

MTBF - 100,000 Hours

Dimension - 85mm (H) x 150mm (W) x 140mm (L)

Optical Drive

**Asus DRW-24B1ST 5.25" Internal DVD
Drive**



Price: \$27.05

Technological Features

Device Type - DVD

Enclosure Type - Internal

Interface - SATA

Read Speed - 48x (CD) / 16x (DVD)

Operating System

Microsoft Windows 10 Home OEM 64-bit



Price: \$111.35

Technological Features

General

Product Type - Box pack

Operating System - Windows 10 Home - 32/64-bit

Media - DVD

Language - English

Licensing

License Type - 1 license

Network Adapter

TP-Link 10/100/1000Mbps Gigabit Ethernet PCI Express Network Card



Price: \$14.99

Technological Features

- Ultra Fast: 10/100/1000Mbps PCIe Adapter upgrade your Ethernet speed to Gigabit
- Automation: Wake on LAN supporting Auto Negotiation and Auto MDI/MDIX
- Supports: IEEE802.3x Flow Control for Full duplex Mode and backpressure for Half duplex Mode; 4k Bytes Port: 1x 10/100/1000Mbps RJ45 Network Media
- Compatibility: Windows 10, 8.1, 8, 7, Vista, XP
- Dual Bracket: Low profile and standard profile bracket inside works with both mini and standard size PCs
- TP-Link offers 2-year warranty and free 24/7 technical support. Please refer to important information section below on all applicable legal disclaimers

Monitor

**Asus VA24EHE 23.8" 1920x1080 75 Hz
Monitor**



Price: \$199.50

Technological Features

3D Capability - no

Screen Size - 23.8"

Wide Screen - yes

Brightness - 250 cd/m2

Contrast Ratio - 1000:1

Pixel - 0.2745 mm

Resolution - 1920 x 1080

Refresh Rate(max) - 75Hz

D-Sub - yes

DVI - yes

HDMI - yes

Keyboard

Redragon K552 Mechanical Gaming Keyboard



Price: \$49.99

Technological Features

- Tenkeyless compact mechanical gaming keyboard
Redragon k552 tkl small compact with dust proof mechanical switches cherry mx red equivalent Linear switches quiet click sound fast action with minimal resistance without a tactile bump feel
- Rainbow LED RGB backlit mechanical USB gaming keyboard 19 different lighting effects and game modes 2 user defined modes 6 colors multiple brightness level breathing speed precision engineered keycaps offering crystal clear uniform backlighting
- Ergonomic designed steel series mechanical game keyboards high-quality durable metal-abs construction with plate-mounted mechanical keys and switches that stand up even during the most testing marathon gaming sessions
- Anti ghosting all 87 keys are conflict free nkey rollover featuring 12 multimedia keyboard keys and a non-slip ergonomic, splash-proof design comes with gold-plated high-speed corrosion free USB connector for a reliable connection
- Compatible with windows 10, windows 8, windows 7, windows vista, or windows xp, limited mac os keyboard support works well with all major computers brands and gaming pcs.

Keyboard

Logitech G502 HERO Wired Gaming Mouse



Price: \$63.00

Technological Features

- High performance HERO 16K Sensor: Logitech's most accurate sensor yet with up to 16,000 DPI for the ultimate in gaming speed, accuracy and responsiveness across entire DPI range
- 11 Customizable Buttons and Onboard Memory: Assign custom commands to the buttons and save up to five ready to play profiles directly to the mouse. Zero smoothing/acceleration/filtering
- Adjustable Weight System: Arrange up to five removable 3.6 grams weights inside the mouse for personalized weight and balance tuning
- Programmable RGB Lighting and LIGHTSYNC Technology: Customize lighting from nearly 16.8 million colors to match your team's colors, sport your own or sync colors with other Logitech G gear
- Mechanical Switch Button Tensioning: Metal spring tensioning system and pivot hinges are built into left and right gaming mouse buttons for a crisp, clean click feel with rapid click feedback

Total Cost



Overall Cost: \$1072.06

Total Costs

Cpu - \$105.78

Motherboard - \$82.98

Memory - \$87.20

Storage - SSD: \$37.51, Hard Drive: \$59.99

Video Card - \$137.50

Case - \$54.99

Power Supply - \$82.81

Optical Drive - \$26.99

Operating System - \$111.35

Wired Network Adapter - \$14.99

Monitor - \$169.99

Keyboard - \$49.99

Mouse - \$49.99

Questions



Why Did I Choose These Types Of Components To Build My Computer?

The reason as to why I choose these specific components to build my computer is most often due to their price and performance. All of these components offer cheap, budgeting prices without sacrificing a lot of their performance due to these prices. They carry very decent performance at their prices thus, making me choose these specific components.

Which Part Of My Build I Am Most Satisfied With?

I think the part in which I am most satisfied with is the CPU. The reason as to why I am most satisfied with my CPU is because I found it at a cheaper price than most others CPU, with its performance being similar or if not the same to other types at a cheaper price. This CPU also has a fan implemented on it already. Overall, the CPU I got was a deal, allowing me to splurge a bit more money on other parts while also allowing me to not get it an expensive fan for it, greatly giving me more wiggle room for my budget.

Questions Part 2



If I Had \$500 More, What Would I Get

There are two things that I would like to get if I had \$500 more. One of them is a new video card. Most likely the MSI GeForce GTX(<https://www.amazon.ca/dp/B01MG3TX4F?tag=pcpof-20&linkCode=ogi&th=1&pssc=1>) costing only \$314.30. This video card is the one I would instantly get as not only is the price on the cheaper side of things, but the performance this video card has is really good compared to the one I have. The second item would just be a better keyboard. It would be the Razer Huntsman Mini Gaming Keyboard (<https://www.amazon.ca/dp/B08B3CFL6W?tag=pcpof-20&linkCode=ogi&th=1&pssc=1>) which has a price of \$151.38. The only reason why I would like to get this keyboard is because it is much better looking and feels more cleaner compared to the one I have. This keyboard is also more smaller, compared to my other keyboard, thus making me feel much more better if I was using it.

Questions Part 3



What Was The Biggest Challenge In Building This PC

I believe the biggest challenge in building this PC is staying in budget. Staying in budget is one of the hardest things to do, as sometimes you find parts that are really good however mostly cost a decent amount, taking a great chunk of your budget. There were a lot of parts that I found really good however costed a decent amount which overall caused me to look over it. Staying in budget takes a great amount of time as you have to find the perfect or almost perfect part for your PC. It's really hard trying to find a well-performing part while also being cheap, thus the search was extensively long. However, once you find that perfect part, great satisfaction and pride will come. Yet, if you ask me if I would like to do that again, I would most likely say a hard no. Overall, trying to build a PC with \$1000 is a hard thing to do in present time and allowed me to see that I would need much more money if I would like to buy one.