# We develop.

What is bottleneck?

Bottleneck is a kind of hardware limitation in your computer. A bottleneck occurs when the capacity of an application or a computer system is severely limited by a single component. Components that often bottleneck are graphic card, processor and HDD. Bottlenecks affect microprocessor performance by slowing down the flow of information back and forth from the CPU and the memory. If all of the components of a system are not able to feed the same amount of data at the same speed, a delay is created. You system is specified by your weakest component, not the fastest one. For example, a 2GB processor will be severely bottlenecked by an 800MB memory bandwidth.
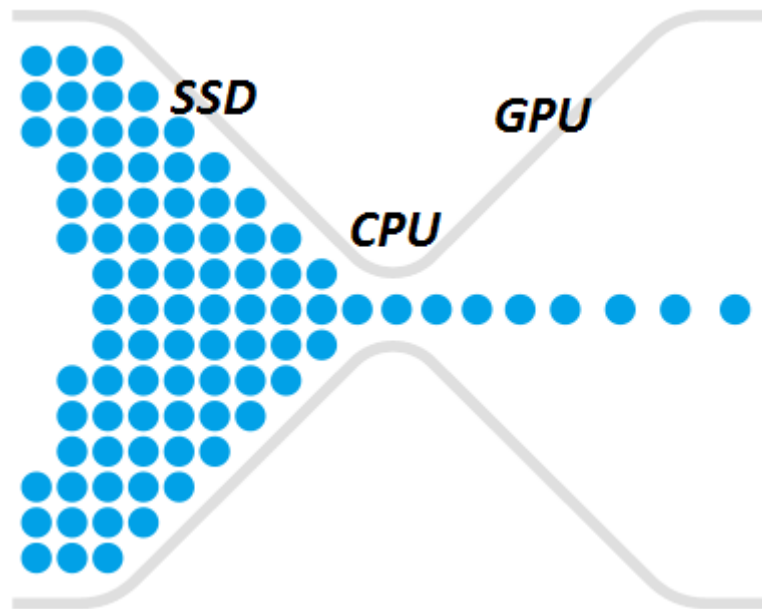
Our Calculator

# Bottleneck calculator

Average bottleneck percentage: **36%**

*This result is based on average CPU and GPU usage from different programs and games. It changes based on operating system, background processes activity and targeted applications. This result is not universal and changes based on differences in hardware and software enviroment.

Bottleneck detected: Your GPU is too weak for this processor.

AMD Ryzen 5 1600 with **GeForce GTX 1050 Ti (x1)** will produce **36%** of bottleneck. Everything over 10% is considered as bottleneck. We recommend you to replace **GeForce GTX 1050 Ti** with **GeForce GTX 980 Ti**.

Best graphic cards with AMD Ryzen 5 1600

	GPU	G2D Mark	Bottleneck
1.	GeForce GTX 980 Ti	910.56	0.42%
2.	Radeon RX Vega 56	799.19	0.62%
3.	Radeon RX Vega 64	799.24	1.82%
4.	Radeon Vega Frontier Edition	805.29	2.32%
5.	GeForce GTX 1080	948.2	2.99%
6.	GeForce GTX 1070 Ti	920.88	3.43%
7.	NVIDIA TITAN X	906.69	5.39%
8.	NVIDIA TITAN Xp	892.92	5.97%
9.	Quadro P6000	936.97	6.33%
10.	TITAN V	914.55	6.95%
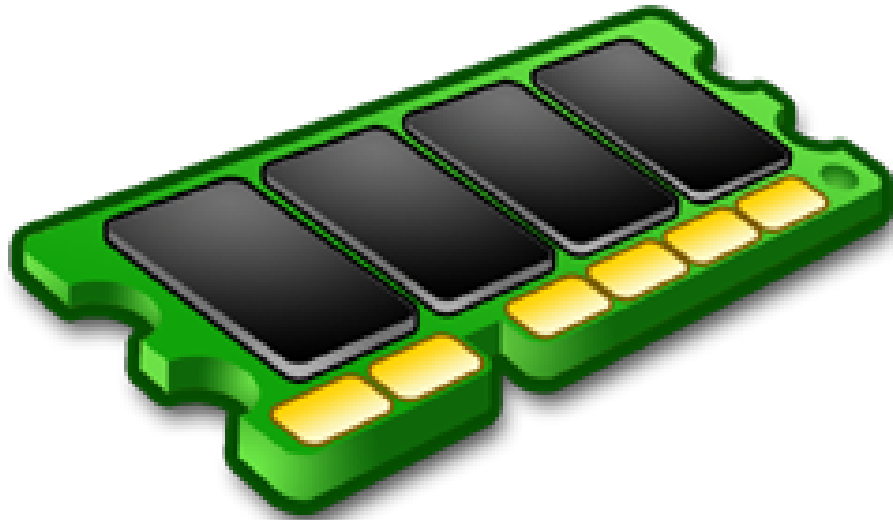
RAM recommendation

Random-access memory is a form of computer data storage which stores frequently used program instructions to increase the general speed of a system.

AMD Ryzen 5 1600 will need at least 16GB of RAM to work well. Memory should be splitted in 2 sticks if your motherboard supports dual-channel memory layouts, otherwise in 1 stick.

Storage recommendation

Solid-state drives (SSDs) are expensive and hard disk drives (HDDs) are slow. Now that you can buy a hybrid of the two, there are a lot of choices with varying costs.

Case #1: Cost Is Irrelevant, I Have Small Storage Needs, and Speed Is Paramount - Buy **SSD**

Case #2: Cost Is Irrelevant, I Have Large Storage Needs, and Speed Is Important - Buy **SSD** and **HDD**

Case #3: I'm on a Budget, I Have Large Storage Needs, and Speed Is Irrelevant - Buy **HDD**

Case #4: I'm on a Budget, I Have Large Storage Needs, and Speed Is Important - Buy **Hybrid**

New calculation (http://thebottlenecker.com)

Statistics

Informations are provided since beginning of **2018**