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How Every Component Operates in a Computer by [Tony Farinholt](#)

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While almost every device is a full-fledged computer system and they are so widespread, few people know how they work. Building a new section of knowledge starts by understanding how the computer system operates internally, but most can go through their lives with no need to know. Computers are actually much less complicated than many think, but there are a few key ideas that one must grasp to fully understand the workings of a system.

The central processing unit, or CPU, is the main brain of the entire system that allows it to work. This is just like the brain of a human that retains memory and passively and actively performs calculations for every task in everyday life. Computers today are improving by adding more cores, which are basically completely separate processors in one single chip. There are three different levels of cache memory that are used comparable to system RAM, but with faster access to the processor and system itself. To prevent from needing to reprocess information over and over again, the cache will hold frequently processed info to provide it much faster. The level 1 cache areas will generally be extremely limited in space but be extremely fast, while it gets slow but more plentiful space-wise as the levels increase.

The system RAM is the next level of memory, but serves a slightly different function than cache. When a program loads, it is essentially being transferred from the hard drive to the system's RAM for quicker reading. Even though loading to the RAM is where a lot of the wait time is spent when opening an application, without it, many different things would not be possible because things would be so slowly pulled from the hard drive. When the computer system is powered off all the information in the RAM is erased, and because of that a hard drive is needed to permanently store information.

The hard drive is straightforward: it is a device that permanently stores everything that is installed on one's system. While the other components of hardware are not necessary to make the system work, they generally provide a needed operation. In order to share files and gain access to the Internet, a network card must be used. While data centers require many Cisco GLC-T or other SFP transceiver modules to run efficiently, most home systems get away with using a single Ethernet port per system for communication. Normally a sound card and video card need to be installed to produce a picture to see and sound. Motherboards are made to connect everything together and process information between them with simpler integrated chipsets.

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[Tony Farinholt](#) - About Author:

FluxLight was founded in 2003. Our focus has been on providing quality fiber optic interfaces, a title SFP transceiver modules [SFP transceiver modules](#), a title GLC-T [GLC-T](#), GBICs, and related products for local and wide area networking products. We stock optical transceivers from top vendors. FluxLight is convinced the path to success is through excellence and customer service. Our customers are our number one priority. We know you have many choices of where to buy so we do our best to provide the best SFP and GBIC products, at the best prices with the best possible support.

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