Computer Components

Level 1

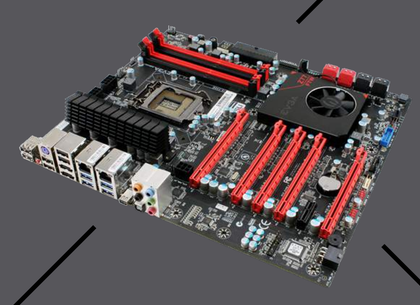
A computer is a machine that can be instructed to carry out sequences of arithmetic or logical operations automatically via computer programming.

Level 2

In the Computer is located components:

Level 3

A motherboard is the main printed circuit board (PCB) found in general purpose computers and other expandable systems. It holds, and allows communication between, many of the crucial electron components of a system, such as the central processing unit (CPU) and memory, and provides connectors for other peripherals. Unlike a backplane, a motherboard usually contains significant sub-systems such as the central processor, the chipset's input/output and memory controllers, interface connectors, and other components integrated for general purpose use and applications.



A solid-state drive (SSD) is a solid-state storage device that uses integrated circuit assemblies to store data persistently.

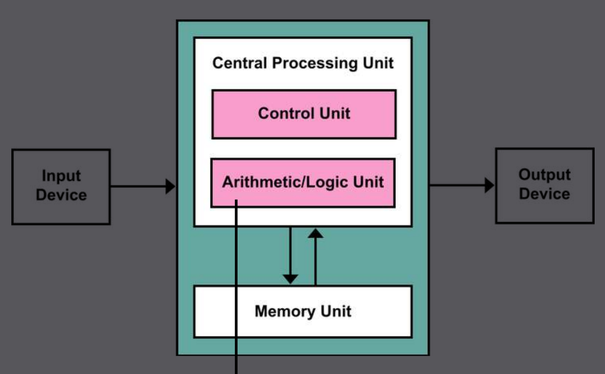
A power supply unit (or PSU) converts mains AC to low-voltage regulated DC power for the internal components of a computer. Modern personal computers universally use switched-mode power supplies.

Level 4

A central processing unit (CPU), also called a central processor or main processor, is the electronic circuitry within a computer that executes instructions that make up a computer program.

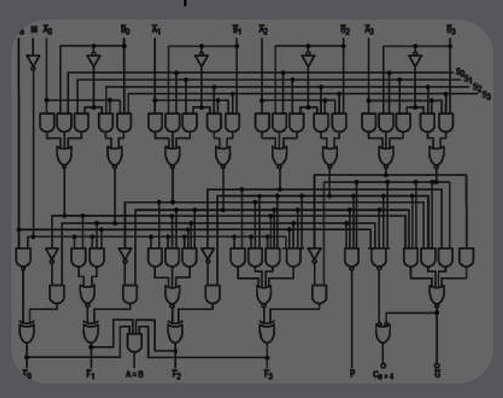
A graphics processing unit (GPU) is a specialized electronic circuit designed to rapidly manipulate and alter memory to accelerate the creation of images in a frame buffer intended for output to a display device.

Level 5



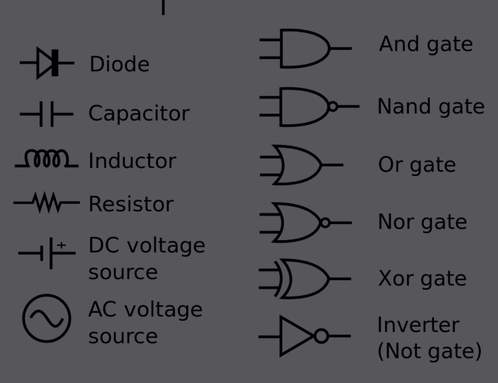
The control unit (CU) is a component of a computer's central processing unit (CPU) that directs the operation of the processor. It tells the computer's memory, arithmetic and logic unit and input and output devices how to respond to the instructions that have been sent to the processor.

Level 6



An arithmetic logic unit (ALU) is a combinational digital electronic circuit that performs arithmetic and bitwise operations on integer binary numbers. This is in contrast to a floating-point unit (FPU), which operates on floating point numbers. An ALU is a fundamental building block of many types of computing circuits, including the central processing unit (CPU) of computers, FPUs, and graphics processing units (GPUs). A single CPU, FPU or GPU may contain multiple ALUs.

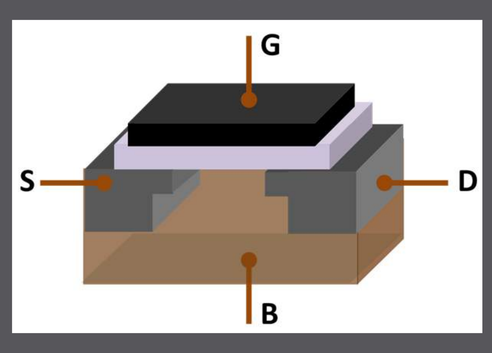
Level 7



A logic gate is an idealized or physical electronic device implementing a Boolean function, a logical operation performed on one or more binary inputs that produces a single binary output. Depending on the context, the term may refer to an ideal logic gate, one that has for instance zero rise time and unlimited fan-out, or it may refer to a non-ideal physical device (see Ideal and real op-amps for comparison).

Logic gates are primarily implemented using diodes or transistors acting as electronic switches, but can also be constructed using vacuum tubes, electromagnetic relays (relay logic), fluidic logic, pneumatic logic, optics, molecules, or even mechanical elements. With amplification, logic gates can be cascaded in the same way that Boolean functions can be composed, allowing the construction of a physical model of all of Boolean logic, and therefore, all of the algorithms and mathematics that can be described with Boolean logic.

Level 8



A transistor is a semiconductor device used to amplify or switch electronic signals and electrical power. It is composed of semiconductor material usually with at least three terminals for connection to an external circuit. A voltage or current applied to one pair of the transistor's terminals controls the current through another pair of terminals. Because the controlled (output) power can be higher than the controlling (input) power, a transistor can amplify a signal. Today, some transistors are packaged individually, but many more are found embedded in integrated circuits.

Level 9

Unit	Short Name	Full Name
1 Bit	Bit	Binary Digit
8 Bits	1 Byte	Byte
2^{10} – 1024 Bytes	1 KB	Kilo Byte
2^{10} – 1024 KB	1 MB	Mega Byte
2^{10} – 1024 MB	1 GB	Giga Byte
2^{10} – 1024 GB	1 TB	Tera Byte
2^{10} – 1024 TB	1 PB	Peta Byte
2^{10} – 1024 PB	1 EB	Exa Byte
2^{10} – 1024 EB	1 ZB	Zetta Byte
2^{10} – 1024 ZB	1 YB	Yotta Byte
2^{10} – 1024 YB	1 Bronto Byte	Bronto Byte
2^{10} – 1024 Bronto Byte	1 Geop Byte	Geope Byte