

# Concepts All

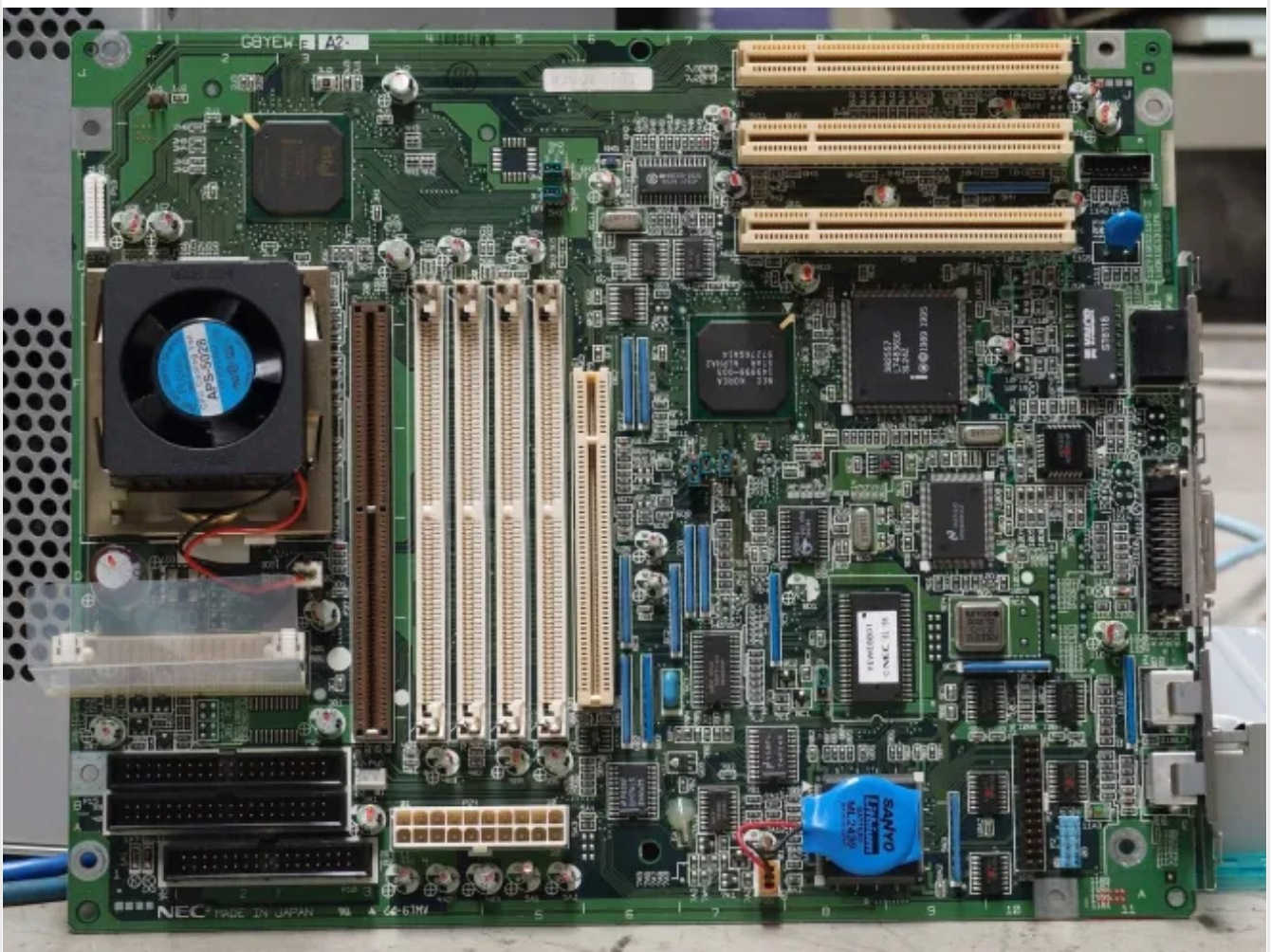
A blog that Clear All Concepts

## 2020:Computer Hardware Terms and Descriptions

By MKS | October 15, 2020

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In this article, We will discuss some basic topics of computer hardware terms and Descriptions.



### Computer Hardware Terms and Descriptions For Beginners

Serial Number	Term	Description
1.	<b>Address Bus</b>	A group of Parallel conductors found on the motherboard that is used by the

		CPU to "address" memory location
2.	<b>AND GATE</b>	A digital circuit whose output is a value of 1 only when all input values are 1.
3.	<b>AT (Advanced Technology)</b>	IBM's name of its' 80286 PC's which was introduced in 1984. The AT form factor refresh to the layout of the components on a motherboard.
4.	<b>ATX (Advanced Technology Extensions)</b>	A more recent motherboard form factor that has to replace the AT form factor.
5.	<b>Baby AT</b>	Reduced the size of the version of the original IBM AT motherboard. Widely used before the late 1990s. But now obsolete.
6.	<b>BIOS (Basic Input Output System)</b>	The BIOS is software built into a ROM BIOS of Flash BIOS chip that used to control Hardware devices such as hard drives, Keyboard, Monitors, and other Low-level devices before a computer system boots into an Operating System.
7.	<b>Bits</b>	The smallest unit of information that is recognized by microcomputer. The shorthand term for binary digit. There are only two possible primary Digits. 0 and 1.
8.	<b>Bootstrap Loader</b>	A program that is automatically run when a computer is switched on (booted). After first performing a few basic hardware tests, that bootstrap loader loads and passed control to a large loader program, which typically then loads the Operating Systems.
9.	<b>Bytes</b>	A group of 8 bits that represents 1 character of Information, (for instance, pressing one key on the keyboard). A byte is the standard unit for measuring memory in a microprocessor. Memory size is measured in terms of Kilobytes(KB) or Megabytes(MB). 1 KB of RAM is 1024 bytes, 1 MB is approximately one million bytes.
10.	<b>Cables</b>	A collection of wires shielded within a protective tube used to connected peripheral devices to a computer.
11.	<b>Cache Hit</b>	When the CPU finds the required information in cache memory it is known as a cache hit.
12.	<b>Cache Memory</b>	Special Memory subsystems in which frequently used data values are duplicated for quick access. A memory cache stores the connections of frequently accessed RAM locations and the address where these data items are stored.
13.	<b>Case</b>	In-text Processing, an indication of whether one or more alphabetic characters are capitalized.

14.	<b>CATV (Cable Television)</b>	A television broadcasting system that uses coaxial or fiber Optics cable to distributes a broadband signal containing many separate program channels.
15.	<b>CD ROM (Compact Disk Read Only Memory)</b>	A disk is similar to an audio compact disc containing computer data.
16.	<b>CPU (Central Processing Unit)</b>	The part of the computer that controls the arithmetic and logical operations and decoding and executing instructions.
17.	<b>Centronics parallel Interface</b>	A de-facto standard for parallel data exchange paths between computers and peripherals, originally developed by the printer manufacture Centronics Inc. The Centronics parallel interface provides eight parallel data lines plus additional lines for control and status information.
18.	<b>Chipset</b>	A group of computer chips or integrated circuits(ICs) that, when working in harmony, manage and control the computer system. This set includes the CPU and other chips that control the flow of data throughout the system. Typical chips sets consist of Bus controller, a memory controller, data and address buffer, and a peripheral controller.
19.	<b>CMOS (Complementary Metal Oxide Semiconductor)</b>	A form of read-only memory chip that gets its name from the way it is manufactured and not the information it holds. CMOS chips are used to store data that read by BIOS to obtain information on Hardwar configurations.
20.	<b>CMOS Battery</b>	Prevents unique information about the setup of the computer from being lost when power is turned off. Also maintains the external clock time.
21.	<b>Combability Mode</b>	A mode on which hardware and software in one system support operations of software from another system.
22.	<b>CISC (Complex Instruction Set Computing)</b>	A computer with many different machine language instructions.
23.	<b>Computing</b>	The process used by computers for receiving information called binary information where values are restricted to Zero (0) and one (1).
24.	<b>Control Bus</b>	The set of lines within a computer that carry control signals between the CPU and other devices.
25.	<b>Controllers</b>	A device that other devices rely on for access to a computer subsystem. A disk controller, for example, for example, control access to one or more disk drivers, managing physical and logical access to the drive or drives.

26.	<b>Coprocessor</b>	A separate circuit inside a computer that adds additional functions of CPU, or handled extra work while the CPU busy.
27.	<b>Data Bus</b>	A group of Parallel conductors found on the motherboard that is used by the CPU to send and received data from all the devices on the computer.
28.	<b>Dial-up Modem</b>	Dail-up Modem is used for the connection that uses the public switched network rather than a dedicated circuit or some other type of Private Network
29.	<b>DMA (Direct Memory Access Channels)</b>	Allows a peripheral device to access the memory of a computer directly, without going through the CPU. This speeds up the transfer of data to or from an External Device.
30.	<b>Disk Cache</b>	A portion of the Computer's random Access memory set aside for temporarily holding information read from disk. A disk cache does not hold entire files, as does a RAM disk that acts as if it were a disk drive.
31.	<b>DSL Modem</b>	DSL modem provides high-speed transmissions over standard copper telephone writing.
32.	<b>EMS (Expand Memory Specification)</b>	A technique developed by Lotus/Intel/Microsoft, that add addressable memory to a computer system. overcoming the original MS-DOS upper memory Limit.
33.	<b>Ergonomic Keyword</b>	A keyword designed to reduce the risk of wrist and hand injuries from prolonged use or repetitive movement.
34.	<b>ECC (Error Correction Code)</b>	The use of code to verify or disprove that a data string received is the same as the data sent.
35.	<b>Expansion Card</b>	A circuit board that is plugged into a computer's bus to add extra functions or resources to the computer. Typical expansion boards add memory, disk driver controller, video Support for laptops, and other portable computers.
36.	<b>External Modem</b>	A stand-alone Modem that is connected via cable to a computer's serial port.
37.	<b>Fire wire Connector</b>	A high-speed serial bus from Apple that Implements the IEEE 1394 standard.
38.	<b>Flash Memory</b>	A type of nonvolatile memory. Flash Memory is similar to EEPROM memory in function but it must to erased in blocks, whereas EEPROM can be erased one byte at a time.
39.	<b>Floppy Drive</b>	Low- Capacity magnetic removable storage drive.

40.	<b>Handshaking</b>	A series of signals acknowledging that communication or the transfer of information can take place between computers or other devices.
41.	<b>Hard Disk</b>	Drives that use one or more rigid platters to store data magnetically.
42.	<b>Hardware CTS protocol</b>	Clear to send, In Serial communication, a signal sent, as from Modem to its computer, to indicate that transmission can proceed. CTS is a hardware signal sent over line 5 in RS-232-C connections.
43.	<b>I/O Ports</b>	An interface through which data is transferred between a computer and other devices, a network, or a direct connection to another computer.
44.	<b>IDE (Integrated Device Electronics)</b>	The most common standard for interfacing hard disk and CD-ROM drives in the PC environments.
45.	<b>ISA (Industry Standard Architecture) Bus</b>	One of the several common expansion slots and card designs.
46.	<b>Interface</b>	The connection between the two devices.
47	<b>IRQ (Interrupt Request)</b>	A wire used by the CPU to control the flow of Data. It prevents devices from trying to communicate with the CPU at the same time by "Interrupting" and temporarily stopping the CPU to deal with a particular request.
48	<b>IO Address</b>	A unique name assigned to each device that allows the CPU to recognize the device with which it is communicating.
49.	<b>ISDN</b>	Integrated Services Digital Network. A high-speed digital communications network evolving from existing telephone services.
50.	<b>Keyboard</b>	A primary Input Device much like typewriter, used for entering text command function shortcuts into a computer.
51.	<b>Keypad</b>	A Calculator-style block of keys, usually in the keyboard.
52.	<b>Kilobytes</b>	A unit of Memory equal to 1024 characters or bytes.
53.	<b>Mechanical Mouse</b>	A type of Mouse in which the motion of all ball on the bottom of the mouse is translated into directional signals.
54.	<b>Membrane Keyboard</b>	A keyboard in which an unbroken plastic or rubber shell cover that has little or no travel

55.	<b>Memory</b>	The area within the computer where information is stored while being worked on. It stores the information that the CPU and software need to keep running.
56.	<b>Microprocessor</b>	An integrated circuit containing the CPU of a computer, all on one chip, so that only the Memory and I/O devices need to be added.
57.	<b>Monitor</b>	A primary Output Device, which resembles a television set. It Visually displays text and graphics.
58.	<b>Motherboard</b>	Also known as PWB. It is a large circuit board found inside the computer. For all particular purposes, it is a computer. it contains the following items: Chip Set, Data Bus, Address Bus, Expansion Slots, Clock, Battery, and Memory.
59.	<b>Mouse</b>	A device used with graphical environments to point and select objects on the systems monitor. They came in a variety of shapes and sizes.
60.	<b>Optical Mouse</b>	A type of mouse that uses a CMOS digital Camera and Digital signal processor to detect Motion.
61.	<b>Opto-Mechanical Mouse</b>	A type of mouse in Which motion is translated into directional signals through a combination of Optical and mechanical means.
62.	<b>Paging</b>	A technique for implementing virtual memory. the virtual address space is divided into a number of fixed-size blocks called pages, each of which can be mapped onto any of the physical addresses available on the system
63.	<b>Pen Drive</b>	Secondary Plug and Play Device.
64.	<b>PnP (Plug and Play)</b>	Windows and BIOS technique for installing PCI, AGP, and Pnp Compliant ISA cards and external devices such as printers, monitors, scanners and also allows for hardware resources to be adjusted to make room for new devices.
65.	<b>POST(Power on Self Test)</b>	The series of tests performed by the BIOS when the computer is turned ON or Rebooted. if POST fails, the computer can not start.
66.	<b>Processor</b>	The computational and control unit of a computer. A processor is a device that interprets and executes instructions. Mainframes and early mini computers contained circuit boards full of integrated circuits that implemented the Processor. Single-Chip central processing units, called Microprocessors.
67.	<b>RAM (Random Access Memory)</b>	The main memory where a computer temporarily stores data.
68.	<b>ROM(Read Only</b>	Computer Memory that contains instructions that do not need to be changed,

	<b>Memory)</b>	such as Operating Systems startup instructions. The computer can access data from ROM but cannot put new data into it.
<b>69.</b>	<b>RISC( Reduced Instruction Set computing)</b>	Uses a smaller and simplest set of instructions to control the processor, thereby greatly enhancing the processor speed.
<b>70.</b>	<b>Scanner</b>	A peripheral that converts information from the written page to digital information that can be used by the computer. Works in a manner similar to the scanning process in a Photo Copy Machine.
<b>71.</b>	<b>Serial Communication</b>	The exchange of information between computers or between computers and peripherals devices one-bit time over a single channel.
<b>72.</b>	<b>Shadow RAM</b>	A shadow RAM rewrites the contents of ROM BIOS and or Video BIOS into Extended RAM. This allows the system to operate faster when application software calls BIOS routines.
<b>73.</b>	<b>Sound Card</b>	A type of expansion Board onto Board PC-compatible compute that allow the playback and recording of sounds, such as from a WAV or MIDI file or a music CD-ROM. Most PCs sold at retails include a sound card.
<b>74.</b>	<b>Static RAM</b>	A form of a semiconductor memory (RAM) based on the logic circuit known as Flip-Flop, which retains information as long as there is enough power to run the device.
<b>75.</b>	<b>System BUS</b>	Support the CPU, RAM, and other Motherboard components that provide the controlling element to the computer. It is responsible for coordinating the operation of the individual system components and central to the communication system of the computer also called the control BUS.
<b>76.</b>	<b>Throughput</b>	The data transfer rate of a network, measured as the number of bits per second transmitted.
<b>77.</b>	<b>Touch PAD</b>	A variety of graphics table uses pressure sensors, rather than the electromagnetic used in more expensive high-resolution tablets, to track the position of a device on its surface.
<b>78.</b>	<b>USB(Universal Serial BUS)</b>	A serial BUS with a data transfer rate of 12 megabits per second for connecting peripheral to a microcomputer. USB can be connected UPto 127peripherals, such as external Printers, ModemsMiceand Keyboards.
<b>79.</b>	<b>VLIW (Very Large Instruction Word)</b>	An arcticture that combines many simple instructions into a single long instructions word that uses different registers.