

Computer Hardware

Terms and Definitions



219 S. Front St., Fremont, Ohio 43420

Computer Sales and Service

Hardware • Software • Training • Programming

(419) 355-0011 or fax (419) 355-0033

AGP-(Accelerated Graphics Port) A high-speed graphics port from Intel that provides a direct connection between the display adapter and memory. AGP is faster than PCI, and only one AGP slot is provided on AGP-equipped motherboards. The PCI slot that would normally hold the display adapter can be used for another device. The brown AGP slot is slightly shorter than the white PCI slot and is located about an inch farther back. Designed to speed up 3-D graphics performance, AGP transfers data at 264 MBytes/sec (1x AGP), 528 Mbytes/sec (2x AGP) and 1 Gbytes/sec (4xAGP).

BIOS-(Basic Input Output System) Although BIOSs were created more than 40 years ago as routines for handling input and output, the term generally refers to the PC's system BIOS, which is stored on a chip and provides an interface between the operating system and the peripheral hardware. The BIOS supports all peripheral technologies and internal services such as the real-time clock (time and date).

BYTE-(BinarY Table) The common unit of computer storage from micro to mainframe. It is made up of eight binary digits (bits). A ninth bit may be used in the memory circuits as a parity bit for error checking. The term was originally coined to mean the smallest addressable group of bits in a computer, which has not always been eight. A byte holds the equivalent of a single character, such as the letter A, a dollar sign or decimal point. For numbers, a byte can hold a single decimal digit (0 to 9), two numeric digits (packed decimal) or a number from 0 to 255 (binary numbers). (1 Megabyte "MB" = 1,048,576 bytes)

CD-R-Compact Disc Recordable. A special type of compact disc which can have information written onto it once. You must have a special CD-R drive to write to these discs, but most CD-ROM drives can read them.

CD-ROM-Compact Disc - Read Only Memory. A CD-ROM is any compact disc which contains computer data. These discs can store huge amounts of data (up to 640 megabytes). If there is a large amount of data on a CD-ROM, then it is usually impractical to copy the data on to the hard disk; in this case, you must insert the disc whenever you want to use the data. The ROM simply means that you can not save information onto these discs. CD-ROM may also refer to the drive used to read these discs.

CPU- The CPU (Central Processing Unit) is the heart of a computer. The CPU is a chip inside the computer that processes all of the information that passes through the computer. It manipulates the information and directs to the different parts of the computer. All of the information that passes through the computer usually goes through the CPU sooner or later.

DVD-A family of optical discs that are the same overall dimensions of a CD, but have significantly higher capacities. DVDs are also double sided, whereas CDs are single sided. Dual-layer versions are also planned. DVD drives read most CD media as well.

Floppy Disk-A round, flexible piece of magnetic media stored within a 3.5 inch square protective plastic case. One floppy disk can store 1.44 megabytes of data. Because floppy disks use magnetic media, they must be kept away from magnets, or the data on them could be erased!

Hard Disk-A storage device inside your computer. Your hard disk is represented by the letter C. You can not physically see your hard disk without opening up your computer, however there is usually a light on the front of a computer which shows when the hard disk is being accessed. Modern hard disks can store more than a thousand times as much as a single standard floppy disk. A hard disk is what permanently stores all the data and programs in your computer. A hard disk is not the computer's memory, however.

IDE-A very popular (even the Macintosh supports it now) industry-standard hard disk drive interface developed by Western Digital and Compaq (in 1986).IDE uses the PC BIOS's provide an interface to the operating system. To reduce the cost, the electronics that are needed to run the disk drive are part of the disk drive, not the disk controller--hence the name. An IDE disk drive "controller" or "adapter" basically directly connects the PC's (usually) ISA bus to the 40-pin IDE disk drive connector. A maximum of two standard hard disk drives (the master and one slave--as selected on the drives) can be driven by one controller.

Keyboard-A keyboard is a device for entering text into a computer. Important: The letters you type will appear where ever the focus (the text cursor) is on the screen, not the mouse. In other words, you can not just move the mouse somewhere and start typing, you must click to move the focus, then you may type.

Memory-The word memory, used by itself, refers to random access memory (RAM). See RAM.

MHz-(MegaHertz) One million cycles per second. It is used to measure the transmission speed of electronic devices, including channels, buses and the computer's internal clock. Megahertz is generally equivalent to one million bits per second or to one million times some number of bits per second.

Modem-A modem is a device which allows your computer to communicate with another computer over phone lines. Usually you will have a modem inside your computer (internal), but there are external modems which plug into the back of a computer. A modem is used to connect to an Internet Service Provider which provides access to the Internet. All modern modems are also capable of sending and receiving faxes, but you must have fax software running to do either. Trivia: What does modem stand for? Answer: It stands for modulator/demodulator!

Monitor-Your monitor is the display (the computer screen). Common monitor sizes are 15", 17", and 19". Note: the actual viewing area of any monitor is usually about an inch less than the size given (which is the "tube size"). An important difference between monitors is the dot pitch. The dot pitch determines how small a dot the monitor can produce, the smaller the dots, the sharper the image. The standard dot pitch is 0.28 mm.

Motherboard-The main printed circuit board in an electronic device, which contains sockets that accept additional boards. In a personal computer, the motherboard contains the bus, CPU and coprocessor sockets, memory sockets, keyboard controller and supporting chips. Chips that control the video display, serial and parallel ports, mouse and disk drives may or may not be present on the motherboard. If not, they are independent controllers that are plugged into an expansion slot on the motherboard.

Mouse-The most popular pointing device. Graphical interfaces (GUIs) are designed to be used with pointing devices, but key commands may be substituted. However, graphics applications, such as CAD and image editing, demand a mouse-like device. On a PC, the mouse generally connects to a serial port via a 9-pin DB or PS/2 connector.

PCI-(Peripheral Component Interconnect) A peripheral bus commonly used in PCs, Macintoshes and workstations. It was designed primarily by Intel and first appeared on PCs in late 1993. PCI provides a high-speed data path between the CPU and peripheral devices (video, disk, network, etc.). There are typically three or four PCI slots on the motherboard. In a Pentium PC, there is generally a mix of PCI and ISA slots or PCI and EISA slots.

RAM-RAM is short for Random Access Memory, usually just referred to as memory. A computer's memory is not like its hard disk which is permanent storage. Memory can only store information while the computer is on,

however it is much faster than a hard disk. A hard disk is a mechanical device, but memory is on computer chips, and information can be accessed from anywhere on the chip almost instantly. When you open a document, it is copied from the hard disk into the computer's memory. There, it can be easily edited; Words can be inserted into a letter, and the rest of the document quickly shifts to accommodate the new words. When you save the document, all your changes will be copied from the computer's memory to the hard disk (overwriting the old copy on the disk).

SCSI-(Small Computer System Interface) Pronounced "scuzzy." SCSI is a hardware interface that allows for the connection of up to seven or 15 peripheral devices to a single expansion board that plugs into the computer called a SCSI host adapter or SCSI controller. Single boards are also available with two controllers and support up to 30 peripherals. SCSI is widely used from personal computers to mainframes.

USB-(Universal Serial Bus) A hardware interface for low-speed peripherals such as the keyboard, mouse, joystick, scanner, printer and telephony devices. It also supports MPEG-1 and MPEG-2 digital video. USB has a maximum bandwidth of 1.5 Mbytes/sec, and up to 127 devices can be attached. Peripherals can be plugged in and unplugged without turning the system off. USB ports began to appear on PCs in 1997, and Windows 98 fully supports it.

Video Card-An expansion board that plugs into a desktop computer that converts the images created in the computer to the electronic signals required by the monitor. It determines the maximum resolution, maximum refresh rate and the number of colors that can be sent to the monitor. The monitor must be equally capable of handling its highest resolution and refresh.

Zip disk- 3.5" removable disk drive from Iomega. It uses design concepts from Iomega's Bernoulli technology as well as hard disks to provide 250MB removable cartridges that cost about \$20. The drive is bundled with software that can catalog the disks and lock the files for security.

A great source for even more terms and definitions can be found at:

<http://www.techweb.com/encyclopedia/>

Other interesting facts:

- **90% of all computer problems are software related (sorry Microsoft)**
- **Microsoft Works is an oxymoron not a computer program.**
- **In 1949, forecasting the relentless march of science, Popular Mechanics said computers in the future may weigh no more than 5 tons.**
- **A silicon chip a quarter-inch square has the capacity of the original 1949 ENIAC computer, which occupied a city block.**
- **Approximately 98% of software in China is pirated. (It's legal)**
- **Experts at Intel say that microprocessor speed will double every 18 months for at least 10 years**
- **Back in the mid to late 80's, an IBM compatible computer wasn't considered a hundred percent compatible unless it could run Microsoft's Flight Simulator.**