C. p. u information in english

In order to continue to enjoy our site, we request that you confirm your identity as a person. Thank you so much for your cooperation. What is CPU: It's meaning is Central ProcessIng Unit. Sometimes referred to simply as the central processor or Nervous Center or heart, but most commonly called processor, the CPU is where most calculations take place. The CPU is the brains of the computer.CPU DefinitionCentral Processing Unit (CPU) is the central component of the computer system. Sometimes it is referred to as microprocessors or processors. It is the brain that runs the display from inside the computer. All functions and processes performed on a computer are performed directly or indirectly by the processor. Obviously, computer processor is one of the most important components of the computer system. CPU is composed of transistance, receiving input and output commodities. Transister performs logical operations called processing. It is also, scientifically, not only one of the most amazing parts of the PC, but one of the most amazing devices in the world of technology. In terms of compliance power, the computer processor is the most important component of a computer system. It adds and compares its data to chip cups. A CPU of all computers, whether micro, mini or main must contain three parts. Part of CPUArithmetic Logical Unit (ALU): It is part of computer processor (CPU) can be used to perform arithmetic and logical operations. An arithmetic-logical unit (ALU) is more divided into two parts, (AU) arithmetic units and a (LU) logical unit. Control Unit (CU): Decode the program's instructions. CPU chip used in a computer partially made from Silica. on other words silicone chip used for data processing is called micro processor. Register: It is temporary storage area of the computer processor. It is managed by Control Unit (CU). Register with data retention, instructions and addresses needed in programs while running. The processor plays an important role in the important aspects of your computer system; Performance: The Processor is probably the most important determinant of system performance of the PCs. While other components also play a key role in determining performance, the processor's ability to dictate a system's maximum performance. Other devices only allow the processor to reach its full potential. Software Support: Newer, processors faster allow the use of the latest software. In addition, new processors like the Pentium and MMX Technology, enabling the use of specialized software cannot be used on earlier machines. Reliability and stability: The quality of the processor is one factor that determines how seriously your system will run. While most processors are very reliable, some are not. This also depends on some measurement on the age of the processor and how much energy it consumes. Energy consumption and Cooling: Original processors consume relatively small power compared to other system devices. New processors may consider great matters of power. Consumption may have an impact on everything from cooling method selection to system reliability in general. Motherboard Support: The processor that decides to use in your system will be a major factor in what sort of chip set we must use, and like what motherboard you buy. The mother in turn dictations many faces. The system's capabilities and performance. Central Processing Unit (CPU) consists of the following characteristics − CPU is considered the brain of the computer.CPU performs all kinds of data processing operations. It stores data, intermediate results, and instructions (programs). It controls the operation of all parts of the computer.cpu itself has to track three components. Memory or Storage Control Unit ALU (Arithmetic Logical Unit) Memory or Storage This Unit can store instructions, data, and intermediate results. This unit provides information to other units of the computer when necessary. It is also known as internal storage unit or the main memory or the main storage or Random Access Memory (RAM). His size affects speed, power, and capabilities. Primary memory and secondary memory are two types of memory in the computer. Functions in the memory unit are − It stores all the data and instructions needed for processing. It stores intermediate results in processing. It stores the final results of processing before these results are released to a production device. All input and output are transmitted to the main memory. This unit controls the operations of all parts of the computer, but does not carry out any current processing operations. Functions of this unit are − It is responsible for controlling the transfer of data and instruction among other units of a computer. It manages and coordinates all the units of the computer. It finds the instructions in the memory, interprets them, and directs the operation to the computer. It communicates with Enter/Exit device for transfer of data or results from storage. It does not process or store data. ALU (Arithmetic Logical Unit) This unit consists of two namely sources, Arithmetic Section Logic Section Arithmetic Section Function of arithmetic section is to perform arithmetic operations such as addition, subtraction, multiplication, and division. All complex operations are done by performing repetitive use of the above operations. Logical Section Function in logical section is to perform logical operations such as comparing, selecting, matching, and merging of data. The Central Process Unit (CPU) has two components: Control Unit Control Unit extracts instructions from memory and decode and execute them. The control unit acts as an intermediary that decodes the instructions sent to the processor, says the other units such as the Arithmetic Logical Unit (below) what to do by providing control signals, and then sending back the processed data back to memory. Arithmetic Logical Unit (ALU) An Arithmetic Logical Unit (ALU) is a circuit inside the processor that handles arithmetic and logical operations does not load data from input registration. After the control unit provides the ALU with the instruction on the operations to be performed, the ALU completes them by connecting multiple transisters, and then stores the results of a production register. The control unit will then move this data to memory. For functioning properly, the CPU depends on the system clock, memory, high storage, and data and address bus. Smaller devices such as mobile phones, calculators, designed gaming systems, and tablets use smaller-sized processors known as ARM CPUs to accommodate their reduced size and space. The CPU is the heart and brain of a computer. It receives input data, executing instructions, and processing information. It communicates with input/output (I/O) devices, which send and receive data to and from the CPU. In addition, the microprocessor has an internal bus for communication and memory in internal cache, called the bus behind. The main bus for transferring data in and out of the CPU, memory, chipset, and AGP socket is called the front-side bus. The CPU has internal memory units, which are called registered. These registry contains data, instructions, counts and addresses used to process the ALU information. Some computers use two or more processors. These consist of apart physical microprocessorse located side by side on the same board or on board apart. Each CPU has an independent kentone, separate cache, and individual path to the front-side system bus. Multiple processors are ideal for parallel intensive tasks that require multitasking. Multicore CPUs are also common, in which one chip has multiple CPUs.Since the first microprocessor was released by Intel in November 1971, CPUs has increased their computer power multiple times. The oldest Intel 4004 processor only performs 60,000 operations per second, while a modern Intel Pentium processor can be done on 188,000,000 instructions per second. A Pentium CPU inside a computer of a central processing unit (CPU) is an important part of each computer. [1] The CPU sends signals to control the other parts of the computer, almost like how a brain controls a body. [2] The CPU is an electronic machine that works on a list of things the computers do, called the instructions. It reads the list of instructions and runs (executing) each one of commands. A list of instructions that a CPU can run is a computer program. The clock rate, or speed of the CPU's internal parts, is measured in hertz (Hz). Modern processors often run so fast that gigahertz (GHz) are used instead. One GHz is 1,000,000,000 cycles per second. Most CPUs used in Desktop (Home) computers are microprocessors made by either Intel or Advanced Micro devices (usually shorter at AMD). Some other companies making CPUS are ARM, IBM, and AMD under ATI technology, which is the leader right now. Most of the CPUs are used in integrated systems for more specialized things, on mobile phones, vehicles, gaming consoles, or in the military. [3] Type CPUS in 20th century engineers invented many different computer architecture. Nowadays most Desktop computers use either 32-bit CPUS or 64-bit CPUS. The instructions in a 32-bit CPU are good at handling data that is 32 bit in size (most instructions think of 32 bit in a 32-bit CPU). Similarly, a 64-bit CPU is good at handling data that is bit 64 in size (and often good at handling 32-bit data too). The size of data that a CPU handle better is often called the word size of the CPU. Many old CPus from their 70s, 80s and early 90s (and many modern prohibited systems) have an 8-bit size or 16-bit word. When CPUs were invented in the mid-20th century they had many different word sizes. Some had different word sizes for instructions and data. The less popular sizes later stopped being used. Most CPUs are microprocessorse. This means that the CPU is just one chip. Some chips and microprocessors inside them also have other elements, and they complete one-chip computers. This is called a microkon. Registered when the CPU runs a computer program, it needs a location to store the data that the instructions operate on (the data that they read and write). This repository is called a register. A CPU usually contains many registry. Registers to be very fast to access (read and write). Therefore, they are part of CPU chip in itself. Memory storing all data in register would make stronger CPUs too complicated (and very expensive). Therefore, registers usually only store the data that the CPU is working on right now. The rest of the data is used by the program stored in RAM (memory). Except in microcontrollers, RAM is usually stored outside the CPU in separate chips. When the CPU wants to read or write data to RAM, it outputs an address to that data. Each byte of RAM contains a memory address. The size of addresses is often the same as the word size: A 32-bit CPU uses 32-bit addresses, etc. However, smaller CPUs, such as 8-bit CPUs, often use addresses that are larger than the word size. Otherwise the maximum program length should be too short. Because the address size is limited, the maximum amount of memory is also limited. 32-bit processors can usually only handle up to 4 GB of RAM. This is the number of different bytes that can be selected using a 32-bit address (each bit can have two values — 0 and 1- and 232 bytes is 4 GB). A 64-bit processor might be able to handle up to 16 EB of RAM (16 accurate, around 16 billion GB, or 16 billion bytes). The operating system can limit it to using smaller amounts. Information stored in RAM is usually volatile. This means that it will disappear if the computer is turned off. Cache On modern computers, RAM is slower than registered, so have slow access to slow programs. To speed up memory access, a faster type of memory is called a cache often placed between the RAM and the main parts of the CPU. The cache is a part of CPU chip in itself, and it is much more expensive per pate than RAM. The cache stores the same data as RAM, but is usually much smaller. Therefore, all the data used by the program might not fit into the cache. The cache tries to store data that is likely to be used a lot. Examples include recently used data and close data in memory of recently used data. Often it makes sense to have a cache for the cache, as it makes sense there is a cache for RAM. In multi-level caching, there are many caches, called the Cache L1, the L2 cache, and so on. The cache L1 is the fastest (and most expensive per byte) cache and is closer to the CPU. The L2 cache is one step away and is slower than the cache L1, etc. The L1 cache often can be viewed as a cache for the Cache L2, etc. Computer buses are threads used by the CPU to communicate with RAM and other components of the computer. Almost all CPUs have at least one data bus – use it and write data – with an address bus – used to address production. Other buses inside the CPU bring data to different parts of the CPU. Instruction sets an instruction set (also called an ISA – Architectural Set Instructions) is a language understood directly by a particular CPU. These languages are also called machine cords or binary. They tell how you tell the CPU to do things differently, such as loading data from memory into a register, or adding the values from two registries. Each instruction in a set of instructions has an encoding, which is how the instruction is written as a sequence of bits. Programs written in programming languages such as C and C++ cannot run directly in the CPU. They must be translated into machine code before the CPU can run them. A company is a computer program that makes this translation. Car code is just a sequence in 0s and 1s, which makes it difficult for people to read. To make it more readable, machine code programs are usually written in assembly languages. Assembly language uses text instead of 0s and 1s: You could write LD A,0 to load the value 0 at register A for example. A program that translates language assembly into machine code is called a gathering. Functionality Here are some of the basic things a CPU can do: Read data from memory and write the memory data. Adds a number to another number. Test to see if a number is larger than another number. Move a number to one location from another (for example, from one register to another, or between a register and memory). Go to another location in the instruction list, but only if some testing is true (for example, only if one number is larger than another). Even very complicated programs can be made by combining many simple instructions like these. This is possible because each instruction takes a very short time to arrive. Many CPUs today can make over 1 billion (1,000,000,000,000) instructions in one second. In general, the more a CPU can be done in a given time, the faster it is. One way to measure a processor's speed is MIPS Instructions per second). Flop (Float-point operation per second) and CPU clock speed (usually measured in gigahertz) are also ways to measure how much work a processor can do in a certain time. A CPU is built from logical doors; he has no moving parts. The CPU is in a computer that connects electronically to other parts of the computer, such as the video card, or the BIOS. A computer program can monitor those periods reading or writing numbers to special locations in the computer's memory. Each instruction pipe executed by a CPU is usually done in many steps. For example, the steps to run an INC instruction A (increase the value stored in Register A by one) on a simple CPU might be this: Read the instruction from memory, decode the instruction (figure out what the instruction does), and add one to register A. Different parts of the CPU do things differently. Often it is possible to run a few steps from different instructions at the same time, which makes the CPU faster. For

example, we can read an instruction in memory at the same time that we decode another instruction, since the steps use different modules. This may have been thought of as having many instructions inside the pipe at once. In the best case, all of the modules are working on different instructions at once, but this is not always possible. More information: Instruction pilining memory management units (MMUs) and virtual memory Modern CPUs often use a memory management unit (MMU). An MMU is an element that translates addresses from the CPU (usually) different RAM addresses. When using a MMU, the addresses used in a program are (usually) by the actual addresses where the data is stored. This is called virtual (opposite of real) memory. A few of the reasons why it's good to have a MMU are listed below: An MMU can hide the memory of other programs from a program. This is done by translate any addresses to hide the addresses while the program is running. This is good because it means that programs can't read and modify the memory of other programs, which improve safety and stability. (Programs can't spray about each other, or step on each other's toes.) Many MMUs may make some part of memory that are not written, non-readable, or non-executable (which means code stored in this part of memory cannot be run). This can be good for stability reasons and security reasons, as well as for other reasons. MMUs allow different programs to have different views of memory. This is handy in many different situations. For example, it will always be possible to have the main code of a program of the same (virtual) address without collision with other programs. It is also handy when there are many different pieces of code (from libraries) that are shared between programs. MMUs allow code from library to appear at different addresses whenever a program runs. This is a good thing because not knowing where things often make it harder for to make programs do bad things. This is called the address space addomisation. Advanced programs and operating systems can use tricks and MMUs to avoid having to copy data between different locations in memory. Several core Multi-core processors became common in the early 21st century. This means that they have many processors built on in the same chip so that they can run many instructions at once. Some processors may have up to thirty-two cores, such as the AMD Epyc 7601. [4] More information: Multi-core processor Manufacturers make CPUS computer: ARM Intel Advanced Micro Device MCST SRISA Sun Microsystems Plus information Microprocessor ALU Execution Unit Floating Point Intel AMD Reference ↑ Stanford University. The modern history of computing. Stanford Encyclopedia of Philosophy. [1] ↑ Kuck, David 1978. Computer and Ordination, Vol 1. John Wiley, p. 12. ISBN 978-047102717164 ↑ Patterson, David A; Hennessy, John L. & Bryan; Larus, James R. 1999. Computer and design organization: the computer /software piece. 2nd ed. San Francisco: Kaufmann, p751. ISBN 978-1558604285 ↑ @IntelSupport. Intel® Xeon® Processor E5-2699 v4 (55M Cache, 2.20GHz). Intel ARK. Intel Corporation. Retrieved December 3, 2016. Other central process units of the Retrieved Citizen from