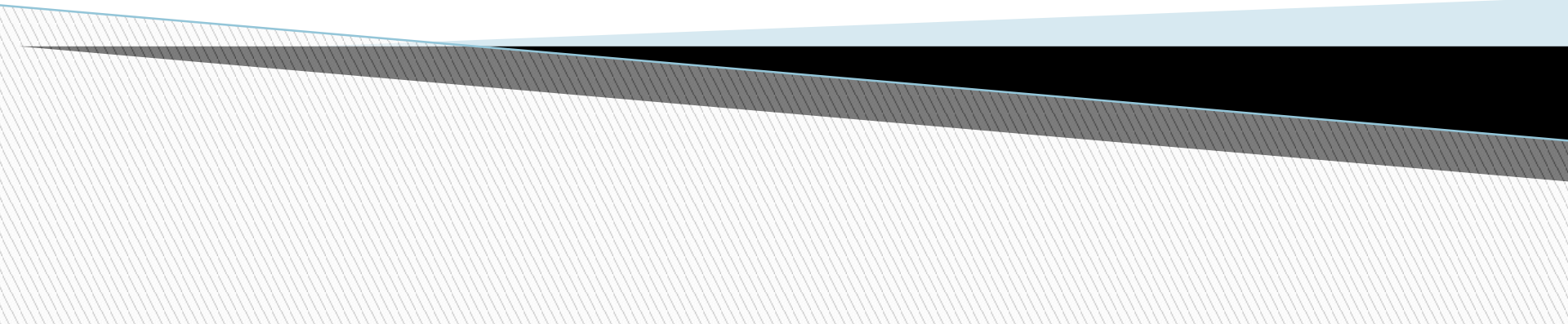


# Computer devices



# Основные компоненты компьютера.

## Функции и взаимосвязь компонентов в процессе работы компьютера.



Блок питания



Материнская плата



Оперативная память



Видеокарта



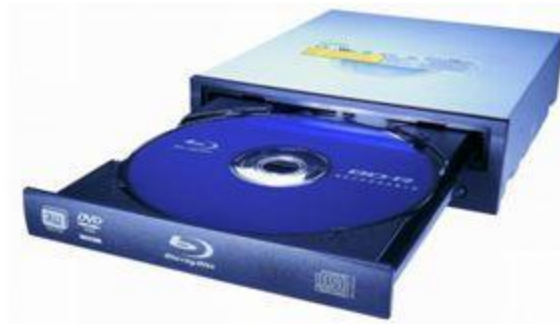
Центральный процессор



Кулер



Жёсткий диск



CD/DVD/Blue ray-привод



Дополнительные карты расширения

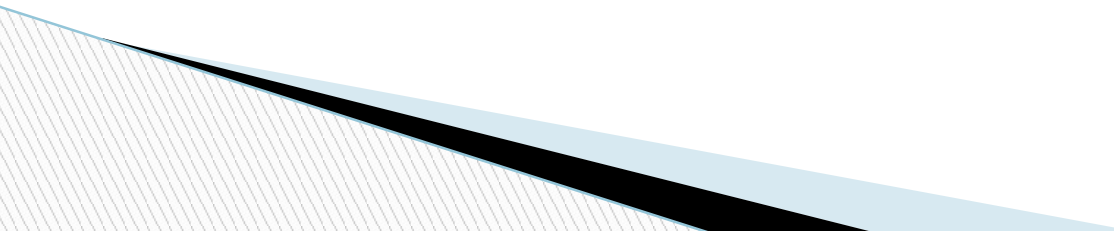
According to the destination computer - this is a universal technical means for information. According to the principles of his device the computer - it is a human model, working with information

There are four main components of information functions of the human:

reception (input) information;  
storing information (memory);  
the process of thinking (data processing);  
transmission (output) information.

The computer includes devices that perform these functions are thinking person:

Input Devices,  
memory devices (memory)  
processing unit (CPU),





Working with the information, a person enjoys not only the knowledge that remembers, but also books, reference books, and other external sources. The computer also has two kinds of memory: (internal) and long term (external) memory.

Structurally, these parts can be combined in a single housing size book or each part may consist of several quite bulky devices.

The circuit device of the computer:



Although the computer is like a man on the basis of your device, but you can not identify the "computer intelligence" with the mind of man. An important difference is that the computer work is strictly subject to the pledged in his program, but man himself governs their actions.

The program - a reference to the sequence of actions (verbs) to be performed by a computer to solve the problem of information processing.

Thus, the PC software principle consists in that the computer performs an action on a predetermined program. This principle provides the versatility of using a computer: a certain time solves the problem of the selected program, respectively.

The information processed on a computer is called data. During execution of the program is stored in the internal memory.

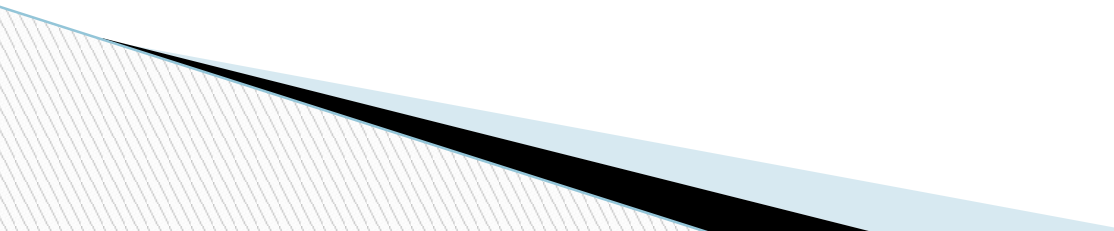
A computer is a collection of devices and programs that control the operation of these devices.

Hardware - a system of interrelated technical devices that perform input, storage, processing and output of information.

Software - a set of programs that are stored on your computer.

Personal computer - a computer designed for personal use. As a rule, a copy of a personal computer used by only one, or, in extreme cases, multiple users (for example, in the family). According to its characteristics it can be different from the mainframe, but functionally able to perform similar operations. According to the method of operation are distinguished desktop, laptop and pocket PC models. In the future, we will consider the desktop models and techniques for working with them.

In today's market a variety of computer equipment modifications and variations of computers is enormous, but even the most unusual set always includes the same kinds of devices.



The basic configuration of a PC - a minimum set of hardware resources adequate to start working with a computer. Currently, desktop base is considered to be a configuration that includes four devices:

System unit;

Monitor;

Keyboard;

Mouse.



**System unit** - the main unit of the computer system. It houses the devices that are considered internal. Devices that connect to the system unit from the outside, are considered external.

The system unit includes a processor, memory, hard and floppy disks, optical disks, and on some other device.





**Monitor** - a device for reproducing the visual character and graphic information. It serves as an output device. They vaguely resemble household televisions.

The desktop computers are typically used to monitor cathode-ray tube (CRT) or flat-panel monitors, liquid crystal display (LCD).

Monitors can have different screen size. Screen diagonal size is measured in inches ( $1 \text{ inch} = 2.54 \text{ cm}$ ), and typically 17, 19, 21 or more inches.





**Keyboard** - keypad device designed to control the computer and input the information into it. Information entered in the form of alphanumeric character data. The standard keyboard has 104 keys and informing about 3 modes light indicator in the upper right corner.



**Mouse** - a device "graphical" control. Currently widespread optical mouse in which no mechanical parts. The light source placed inside the mouse illuminates the surface, and the reflected light is recorded by a photodetector and converted into movement of the cursor on the screen.

Current models of the mouse may be wireless, ie, is connected to the computer without using a cable.

Called peripheral devices connected to the computer from the outside. Typically, these devices are designed to input and output information.

Here are some of them:

Printer;

Scanner;

Modem;

Web-camera.





**Motherboard** - largest PC motherboard. On it are lines that connect the processor to the system memory - the so-called bus. For buses connect the motherboard and all other internal computer devices. Manages the operation of microprocessor motherboard chipset - the so-called chipset.



**CPU. The microprocessor** - the main chip PC. All calculations are done in it. The processor hardware is implemented on a large integrated circuit (LSI). Most of the integrated circuit is actually not large in size and is, on the contrary, a small flat semiconductor plate about the size of 20x20 mm, enclosed in a flat case with rows of metal pins (contacts). BIS is the largest in number of elements. The use of modern high-technology allows you to put on the LSI processor huge number of functional elements, a size of only about 0.13 microns (1 micron =  $10^{-6}$  m). For example, in a processor Intel Core 2 Duo processor with 4 MB cache of about 291 million.





**Random access memory (RAM)**, intended for storage of information produced in the form of memory modules. RAM can be represented as an extensive array of cells in which data and instructions are stored in a time when the computer is turned on. The processor can address to any memory location. The most important characteristic is the speed of the memory modules. Memory modules may differ from each other in size and number of contacts, speed, capacity, etc. information



**Hard disk** - is more than one disk, and the package (kit) disks with a magnetic coating, rotating on a common axis. The main parameter is the capacity measured in gigabytes. The average size of modern hard disk is 120 - 250 GB, and this option has been steadily increasing.

he jokingly Winchester first was named in 1973, as some of its specifications by name like the "hard drive" of the famous brand rifles. Since then, the name stuck.





**Video adapter** - internal device is installed in one of the connectors of the motherboard, and is used for processing the information coming from the CPU or from memory to the monitor and to generate control signals.

In some models, the motherboard chipset video functions are performed by the chip - in this case we say that the graphics card is integrated with the motherboard. If the video card is designed as a separate device called a video card. video connector on the rear wall. monitor connected to it.

**Communication Ports.** For communication with other devices such as a printer, scanner, keyboard, mouse, and so on. N., A computer equipped with a so-called ports. Port - this is not just a connector for external equipment, although the port and the connector ends. Port - a more sophisticated device than a connector, which has its own chips and control software.

Examples of ports:

COM (serial port)

LTP (parallel port)

USB (consistent with high productivity)

PS / 2 (generic mouse and keyboard)



Thank  
You

