

RAM and ROM are two concepts that are easily confused

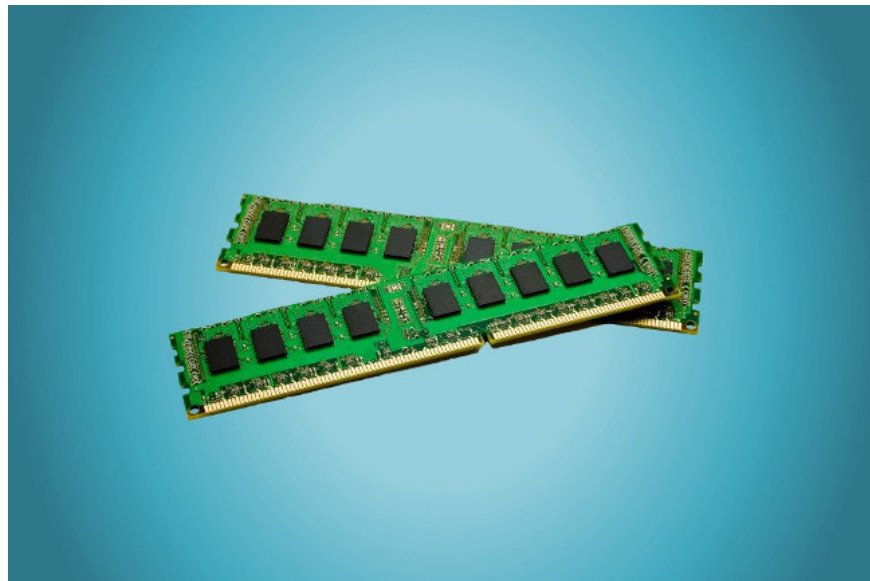
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What is RAM?

RAM stands for Random Access Memory - a computer hardware element in which programs, operating systems and data are used for **temporary storage** to help microprocessors have access faster when needed. RAM is one of the fastest types of computer memory, but as variable memory, data stored on RAM will be lost when the computer is turned off or out of power (out of battery). If you've ever unplugged the computer, you'll see a **rectangular shaped RAM** placed on a slot on the motherboard.

1. Learn about RAM technologies: DRAM, SRAM, SDRAM and newer



For example: The Chrome browser you are using to read this article has been loaded into RAM and running from RAM. However, this information is only obtained when the device is still on or has power, if the computer is turned off, or the RAM is stopped, all the information it has stored will disappear. By the way, please read this article if Chrome consumes too much RAM

Currently, more advanced motherboards come with more than one RAM slot, providing the flexibility to upgrade RAM, increase memory capacity so that the system can achieve better speeds.

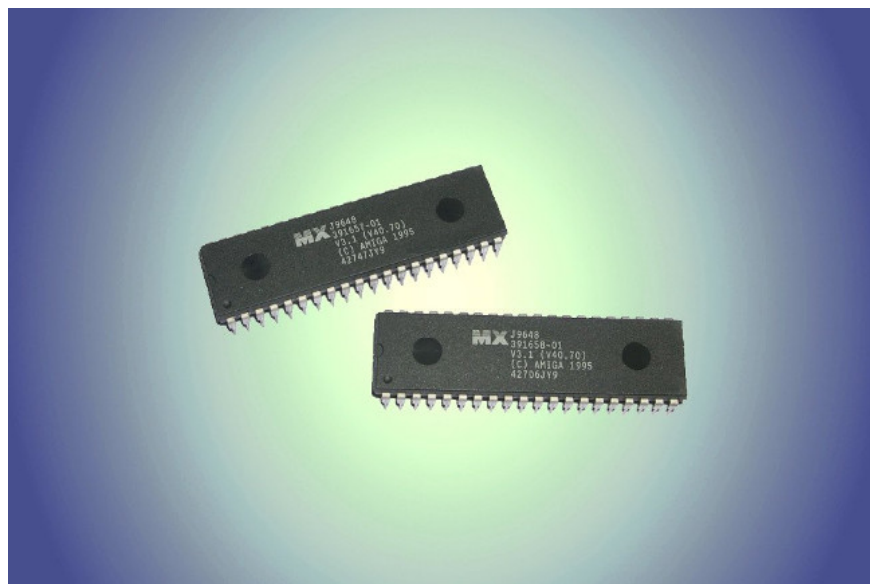
TipsMake.com has a series of very detailed articles about computer RAM, you can read here: [Frequency of RAM laptop and what you need to know](#)

What is ROM?

ROM stands for Read Only Memory - a type **of memory in** which data has been previously written and contains programs that help the computer "boot". Unlike RAM, it will wipe all temporary storage data, **ROM retains the content even after the machine is turned off**; That is why the computer can be turned on at the first use. If there is no ROM, booting the system will be a luxury.

A typical example of a computer ROM is the BIOS, the PROM chip stores the programs needed to start the computer boot process. Using static electrical memory is the only way to start the process of starting the computer and other devices using the same boot process. ROM chips are also used in the game box (cartridge) of gaming devices like Nintendo, Gameboy, Sega Genesis, . These boxes store game programs on a ROM chip read by the console when connected to box.

The oldest ROM type was recorded in 1932 with an empty memory (drum memory). Today, ROM is still used and continues to be improved to have better performance and storage capacity.



The main difference between RAM and ROM

RAM ROM Comparison Features External appearance - RAM is a thin rectangular chip that is inserted into a slot on the motherboard. RAM is usually larger than ROM. - ROM is an optical drive with magnetic tape. Temporary storage capacity - Variable memory, need to be powered to maintain data storage capacity, data loss will be lost. - Static (immutable) memory can store information even when the computer is turned off, power outage. How it works

- RAM is used in normal operation of the computer after booting and loading the operating system.
- Can recover or change the data stored in RAM.
- ROM is mainly used during computer startup.
- Data in **ROM can only be read** , but cannot be edited or changed, which is why it is called 'read-only memory'.

Speed

- The process of writing data to RAM quickly.
- Fast data access speed.
- The process of writing data to the ROM slowly.
- Slow data access speed.

Accessibility - Easily access, change or reprogram information stored in RAM. - Difficult to change, reprogram the information stored on ROM. Storage capacity - A RAM chip can store multiple gigabytes (GB) of data, from 1 GB to 256 GB per chip.- One ROM chip stores several megabytes (MB) of data, usually 4 MB or 8 MB for each chip. Data recording capability - Write data in RAM is also easier than ROM memory.- Information in The ROM is extremely important to the computer and lasts forever.

Hopefully with this very detailed comparison will help you distinguish clearly ROM and RAM on your computer.

See also: 8 easy ways to free RAM to make your computer run faster

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