

What is BIOS?

BIOS, pronounced "BYE-oss," stands for Basic Input Output System and is software stored on a small memory chip in your system's motherboard. When you boot up your system and look at the screen at the right time, you may see a startup message that uses the term "BIOS."

You may have possibly heard variations of the term "BIOS." But, for example, if you're wondering, "Then what is a BIOS?" no worries. It's the same thing. BIOS is alternately called ROM BIOS, PC BIOS, and System BIOS.

BIOS is the first software that runs when you power on your system, performing an initial pack of diagnostic tests (POST, or Power On Self-Test) to see if there are any issues with the hardware. POST is the first step in your hardware's boot sequence. The machine won't continue with the boot sequence if the POST fails.

So, to recap, BIOS is firmware (in other words, software embedded in a piece of hardware) stored on a ROM chip that lets you access and set up your system at its most basic level.

What is BIOS: The Functions of a BIOS

BIOS has four main functions:

- POST: The POST function tests the hardware before loading the operating system; we already discussed this function earlier.
- Bootstrap loader: This function locates a capable operating system. If the loader finds that system, the BIOS passes control over to it.

- BIOS drivers: These are low-level drivers that give your system basic control over its hardware.
- BIOS setup: This function is a configuration program that lets you configure your system's hardware settings. This configuration includes system settings like time, date, and passwords.

And here's a list of functions you can do with most BIOS systems:

- Change the boot order
- Load BIOS setup defaults
- Flash (Update) BIOS
- Create/Delete a BIOS password
- Change the date and time
- Change floppy drive settings*
- Change hard drive settings
- Change CD/DVD/BD drive settings
- View the amount of memory Installed
- Change the boot up num lock status
- Enable or disable the computer logo
- Enable or disable the quick Power On Self Test (POST)
- Enable or disable the CPU internal cache
- Enable or disable the BIOS caching
- Change the CPU settings
- Change the memory settings
- Change system voltages

- Enable/disable RAID
- Enable/disable the onboard USB
- Enable/disable the onboard IEEE1394
- Enable/disable the onboard audio
- Enable/disable the onboard floppy controller*
- Enable/disable the onboard serial or parallel ports
- Enable/disable ACPI
- Change the ACPI suspend type
- Change the power button function
- Change the power-on settings
- Change which display gets initialized first on the multi-display setups
- Reset the Extended System Configuration Data (ESCD)
- Enable or disable the BIOS control of system resources
- Alter the fan's speed settings
- View CPU and system temperatures
- View the fan speeds
- View system voltages

*not relevant in modern systems

When you want to make any changes to the above configurations, save the changes, then restart your system. This process will ensure the changes stick.

