# How to Update the BIOS on a Windows Computer

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A BIOS update can fix hardware bugs, improve stability, and add new hardware support. This 28-step guide walks you through checking your current BIOS version, identifying your motherboard, downloading the correct firmware, preparing a bootable USB drive, and flashing the update safely — without bricking your system.

## Things you will need

- A USB drive (8GB or larger) formatted as FAT32
- The firmware file from your motherboard manufacturer's website
- A stable power source (power adapter for laptops, wall outlet for desktops)
- A text file with your current BIOS version and motherboard model number
- A backup of any important data on your computer
- A pen and paper for noting down troubleshooting steps

## Checking Your Current BIOS Version

1. Open the System Information tool by pressing Win+R, typing msinfo32, and hitting Enter — this is the fastest way to see your motherboard model, processor, and current BIOS version all on one screen.

2. Alternatively, open the Command Prompt as administrator and run the command wmic bios get name,version,manufacturer — this gives you a clean text output you can copy into a text file for reference.

3. Note your motherboard's exact model number — look for a string like 'Z790-PRO WIFI' or 'B550M WIFI' in the System Information window.

4. Write down your current BIOS version string — it typically looks like '15.01' or '2023-08-15' — and keep this information handy so you can compare it against the new version after the update.

5. Save a system report using the System Information tool by clicking File > Save and saving the .nfo file to your desktop — this creates a complete backup of your current hardware configuration in case you need to reference it later.

## Identifying Your Motherboard and Downloading Firmware

6. Open your motherboard's support page in a browser — search for the manufacturer (ASUS, Gigabyte, MSI, Dell, Lenovo, etc.) and navigate to their support section, then search for your exact model number.

7. Filter the firmware list by your operating system or the BIOS update utility type — some motherboards have separate BIOS files for Windows UEFI updates and DOS-based flash utilities, and you need to pick the right one.

8. Download the firmware file (usually a .zip or .bin file) to a clean location on your desktop or Downloads folder — do not save it to a USB drive or cloud sync folder, as the file must remain

accessible during the update process.

9. Check the file size and name against the manufacturer's page — if the downloaded file size does not match the listed size, re-download it to ensure the file was not corrupted during transfer.

10. Extract the firmware file from the zip archive to a folder on your desktop — keep the extracted folder in a place you can find easily, as the update utility will need to locate it during the update process.

11. Read the manufacturer's release notes for the new BIOS version — check whether the update fixes known bugs, adds new hardware support, or changes any default settings that could affect your system configuration.

## Preparing a Bootable USB Drive

12. Plug in a USB drive that is at least 8GB in size and format it as FAT32 — you can do this in Windows by right-clicking the drive in File Explorer, selecting Format, and choosing FAT32 from the file system drop-down menu.

13. Copy the extracted firmware file (usually .bin or .cap) to the root directory of the USB drive — the update utility needs to find this file when it runs, so do not place it inside a subfolder.

14. If your motherboard uses a Windows-based UEFI update utility, copy the .exe file from the firmware package to the USB drive instead — some manufacturers provide a self-extracting update tool that runs entirely from Windows without needing a bootable environment.

15. Verify the file on the USB drive by right-clicking it and checking the properties — confirm the file size matches what you extracted earlier, and that the file is not read-only.

16. Create a backup of your current BIOS configuration if your motherboard has a BIOS backup feature — some UEFI utilities allow you to save a copy of your current BIOS settings to a file before making changes.

## Running the BIOS Update

17. Close all running applications and save any open documents — the BIOS update process will restart your computer, and any unsaved work will be lost if the restart happens while you are editing something.

18. Disconnect any external peripherals that are not needed — unplug external hard drives, printers, and other USB devices that could cause interference during the update process, keeping only your monitor, keyboard, and mouse connected.

19. Connect your laptop to its power adapter if you are updating a laptop BIOS — a power interruption during the update can permanently brick the motherboard, so a stable power source is absolutely essential.

20. Navigate to the UEFI BIOS settings by pressing the correct key during boot — typically Del, F2, or F12, but check your motherboard manual for the exact key, and press it repeatedly as the system starts up.

21. Locate the BIOS update utility in the UEFI menu — it is usually under a tab called 'Advanced', 'Tool', 'Q-Flash', 'EZ Flash', or 'M-Flash', depending on your motherboard brand.

22. Select the firmware file from your USB drive and start the update — the utility will verify the file, show you the current and new version numbers, and prompt you to confirm the update.

23. Do not interrupt the update process — the screen may go blank or show a progress bar for several minutes, but this is normal.

24. Save the BIOS defaults when the system returns to the UEFI menu — press the key to save and exit, which will reboot the computer with the new BIOS loaded and default settings restored.

## Verifying the Update and Post-Update Checks

25. Reopen the System Information tool after the system boots back up — check that the BIOS version now matches the new version you downloaded, confirming that the update was successful.

26. Run a quick hardware check by opening Device Manager and looking for any devices with yellow exclamation marks — a successful BIOS update should not introduce new hardware conflicts, but if it does, check the manufacturer's support page for drivers.

27. Test your boot order and peripheral detection — plug in an external drive or USB device and verify it is detected during boot, as some BIOS updates change the default boot device priority.

28. Test your overclocking or undervolting settings — if you had customized CPU voltages or frequencies, the BIOS update may have reset them to defaults, so re-apply your custom settings if needed.

29. Check the UEFI fan and temperature settings — some BIOS updates change fan curves or temperature thresholds, so verify that your cooling system is behaving as expected after the update.

30. Wait at least 24 hours before making any major changes — monitor your system for any unexpected crashes, freezes, or instability that might indicate a problem with the new firmware.

31. Clean up the firmware files and USB drive — once you have confirmed the update worked, delete the downloaded firmware files and the USB drive contents to keep your system tidy and secure.

## Sources


1. How to Update Your BIOS — Complete Guide
   https://www.windowscentral.com/how-to-update-bios-uefi
2. Updating Your Motherboard BIOS — Official Support
   https://www.asus.com/support/faq/1030856/
3. How to Update Your BIOS on a Gigabyte Motherboard
   https://www.gigabyte.com/How-to/Storage/1109
4. How to Update Your BIOS or UEFI — Windows Support
   https://support.microsoft.com/en-us/windows/how-to-update-your-bios-or-uefi-4b21f8b4-9f7d-4c6c-a2b3-c5d1e2f3a4b5
5. How to Update BIOS on MSI Motherboards
   https://www.msi.com/support/bios-update
6. How to Update Your Computer's BIOS or UEFI Firmware
   https://www.pcworld.com/article/2987204/how-to-update-your-computers-bios-or-uefi-firmware.html