

HP Consumer PCs - Improving video game performance or FPS (Windows 10)

Object name	con_win_genpc_c_improve_video_game_performance
GUID	GUID-BD141D6C-CD65-4DA2-82E1-83C8FA61F3ED
Version	1

Learn more about what factors influence the way a video game is displayed on your computer, and how to improve performance.

What is FPS?

Object name	con_win_genpc_e_what_is_FPS
GUID	GUID-CA86C04C-ECD0-42DD-BBC2-8B33CA1AA974
Version	1

Frames Per Second (FPS) is a measurement of how many times the screen does a full refresh within a second. FPS is a fluid measurement that fluctuates based on rendering speed, image complexity, refresh rates, and more.

The following factors contribute to FPS:

- **Monitor limitations:** The refresh rate of a monitor, measured in hertz (Hz), demonstrates the maximum number of cycles per second. 1Hz is equal to 1 FPS.
- **Tearing:** The term tearing describes a visual artifact where the monitor shows information from different frames on a single screen.
- **Sync technologies:** There are several sync technologies that fix tearing: V-sync, AMD Free-Sync, NVIDIA G-sync, and more. They all work differently to address the same problem. Check your hardware specs to see which technologies, if any, are compatible with your devices.

Measure FPS

Object name	con_win_genpc_e_measure_FPS
GUID	GUID-CFF9E297-44C5-491F-B253-9EFBFC92A54
Version	1

You can monitor FPS through in-game resources or using available applications.

- **AMD RadeonPro:** Systems using a supported AMD graphics card can use AMD RadeonPro to monitor FPS.
- **NVIDIA GeForce Experience:** Systems using a supported NVIDIA graphics card can use GeForce Experience to monitor FPS.
- **In-game:** Most games have an FPS monitoring system that can be turned on through the game menu.
- **Downloadable applications:** There are a variety of software applications available to monitor FPS. See the technical specifications of your graphics card to check compatibility.

Improve performance or FPS

Object name	con_win_genpc_t_improve_performance_or_FPS
GUID	GUID-3FB0B2E3-67C4-4805-B4D9-618BAF05F99B
Version	1

You can improve performance or FPS by updating the BIOS or graphics driver, changing the graphic settings, turning on Game Mode, or plugging in the notebook PC.

- Update the BIOS.
 - For desktop PCs, go to [HP Consumer Desktop PCs - Updating the BIOS \(Basic Input Output System\) \(Windows\)](#).
 - For notebook PCs, go to [HP Consumer Notebook PCs - Updating the BIOS \(Basic Input Output System\) \(Windows\)](#).
 - Update the graphics driver. Go to [HP Customer Support - Software and Driver Downloads](#), enter your PC model, and then select the driver for your graphics card.
 - Most games allow you to change the graphics settings. To improve FPS, try using a lower graphic quality setting.
 - Close any applications or programs that are not being used.
 - Plug notebook PCs into an AC adapter to give the graphics card more power.
 - Turn on Game Mode. Game Mode is a new feature in Windows 10 Creators Update that improves gaming performance by limiting use of system resources by background processes and programs while a game is running.
1. Press the [Windows](#) key  + [g](#) to open the Game bar.
 2. Click the **Settings** icon  on the Game bar.
 3. Select the check box next to the game title to enable Game Mode for that game.