



WebGL™

WebGL FPS Accelerator

agnosia games

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**IF YOUR PROJECT DOESN'T HAVE THESE PACKAGES,
PLEASE INSTALL FROM "PACKAGE MANAGER";**

DEPENDENCIES OF THE ASSET:

- **"POST PROCESSING"**
- **"TEXT MESH PRO"**

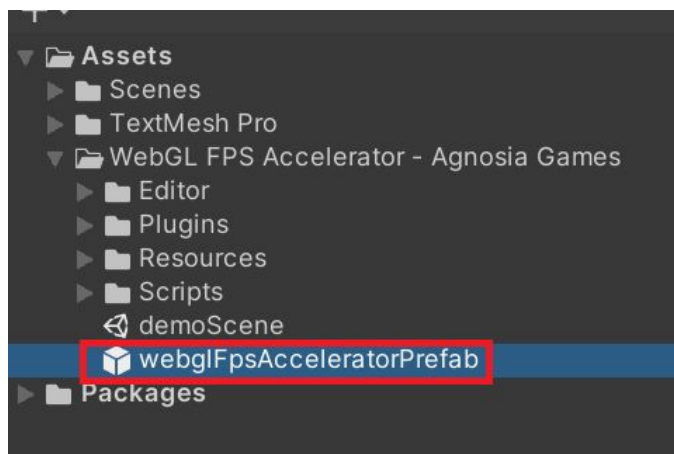
WebGL FPS Accelerator

What's WebGL FPS Accelerator?

WebGL FPS Accelerator (WFA) is a "Dynamic Resolution System" and an advanced "DPI Control System" for WebGL that improves the FPS of your game. WebGL FPS Accelerator allows you to provide a balance between performance (FPS) and image quality (DPI).

How It Works?

Dynamic Resolution System allows you to dynamically adjust DPI-Render Scale, to reduce workload on the GPU. In cases where the application's frame rate reduces, WFA will gradually scale down the resolution to maintain a consistent frame rate instead.



Quick Start

Add "webglFpsAcceleratorPrefab" to your scene. And That's All! You can find this prefab in "Assets/WebGL FPS Accelerator".

What's Next?

You can set the target FPS range with parameters "fpsMax" and "fpsMin" on the inspector or on in-game UI. The system will set DPI-resolution to catch this FPS range dynamically.

Description of WebGL FPS Accelerator Parameters

- **dynamicResolutionSystem:** If this parameter is True then you can choose the desired FPS range and WFA will dynamically adjust DPI-resolution to match the best FPS according to the DPI range specified.
- **DPI (dots per inch):** Current image resolution. If “dynamicResolutionSystem” is False, then you can set this value to catch your desired FPS.
- **FPS Range (fpsMin-fpsMax):** Your desired target FPS range.
- **dpiIncrease:** Controls the speed of DPI-image resolution decrease, which occurs when FPS are below the fpsMin parameter.
- **dpiDecrease:** Controls the speed of DPI-image resolution increase, which occurs when FPS are above the fpsMax parameter.
- **dpiMin:** this setting allows you to decide the minimum image resolution.
- **dpiMax:** this setting allows you to decide the maximum image resolution.
- **Measure Period:** For example, if this value is 2, per 2 seconds, WFA changes image resolution according to the average FPS of last 2 seconds if it is necessary.
- **useRenderScaleURP:** If the project is using Universal Render Pipeline, then you can enable this method. If this bool is True, WFA will use the “Render Scale” parameter of the render pipeline to adjust resolution. An advantage of this method is that downsampling does not affect the UI objects.

FAQ (Frequently Asked Questions)

- ***Why am I getting errors about "Post Processing" or "Text Mesh Pro?"***

You need to install these packages. Because these are dependencies of the asset. This will fix errors.

- ***What happens if I keep the fpsMin and fpsMax settings very close together?***

It depends on "dpiIncrease-dpiDecrease". For example, if dpiIncrease is "1", and if this amount changes FPS more than 5 fps (e.g. 7), then the target FPS range could be 7 or 8. Because if the target FPS range is smaller than 7 (e.g. 30-32), then the plugin cannot enter that range sometimes, and it has to work forever with a loop of increasing-decreasing. For example, if the current FPS is 28, after DPI increase it can be 35 with extra 7 FPS, but this time, plugin will try to decrease DPI again because 35 is bigger than 30-32 range, and FPS will be 28 again, and the plugin will try to increase DPI again. This can make a loop forever. AND THIS MAY CAUSE GETTING SPIKES AND DROPS.

- ***How Can I Hide In-Game UI?***

You can use "showHideUI" bool to enable-disable In-Game UI on Inspector on "webglFpsAcceleratorManager" object.

- ***The frame rate is the same with the asset or without. What is the problem?***
 - If your frame rate is in "target fps range", the plugin will not do anything. Try to change fpsMin-fpsMax parameters.
 - You can disable "dynamic resolution" mode, and you can change DPI manually, to see if there is a difference. You should see downsampling on resolution. If you see downsampling but no difference on Frame Rate, you can try on different devices. If the graphics performance of the device is good or your project has low FPS because of the "CPU load", you may not see much difference.

Additional Support & Questions

This works only on WebGL BUILDS. NOT ON EDITOR. So build your project to test.

If you have any issue using WFA, please send an email to agnosia.developer@outlook.com