Stats Monitor - Performance Stats & Graph for Unity

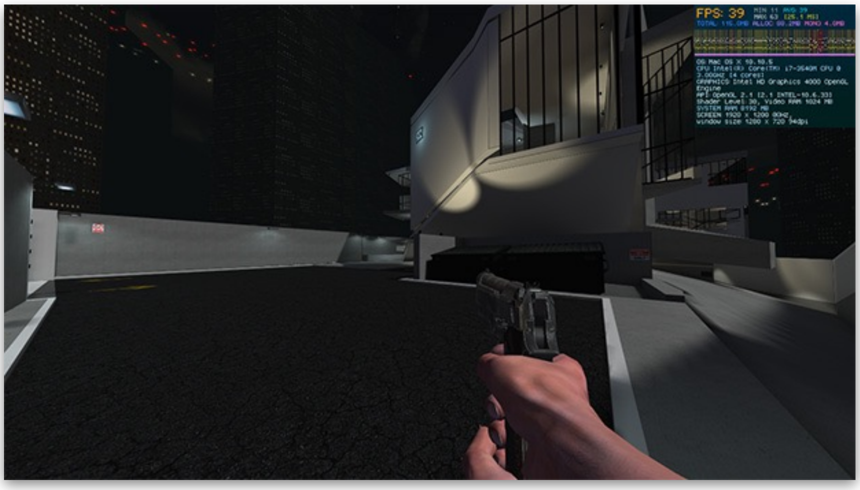
Thank you for purchasing Stats Monitor! Stats Monitor is a highly customizable In-game FPS counter for Unity projects that displays a number of performance-related statistics and a graph useful for game performance testing. The monitor is based on a very similar stats monitor that was originally developed as part of the Flash-based Tetragon game engine (which can be seen in this online demo: labs.hexagonstar.com/tetragon). Stats Monitor for Unity is an adequate successor that adds several new features suited to Unity.

Usage

To add Stats Monitor to a project simply do one of the following:

Recommended: Use the menu ***GameObject/Create Other/Stats Monitor***

When running the game, Stats Monitor will automatically appear in the top-right corner as the following image demonstrates.



```
FPS: 39   MIN 11  AVG 39
          MAX 63  [25.1 MS]
TOTAL 115.0MB ALLOC 60.2MB MONO 4.0MB
OS Mac OS X 10.10.5
CPU Intel(R) Core(TM) i7-3540M CPU @
3.00GHz [4 cores]
GRAPHICS Intel HD Graphics 4000 OpenGL
Engine
API OpenGL 2.1 [2.1 INTEL-10.6.33]
Shader Level 30, Video RAM 1024 MB
SYSTEM RAM 8192 MB
SCREEN 1920 x 1200 @0Hz,
window size 1200 x 720 94dpi
```

Using the Touch Controls

Stats Monitor can be controlled on supported mobile touch display devices with the following touch combinations. Please not that while these are the default controls, the number of touches/taps can be changed in the Stats Monitor component inspector.

Toggling between inactive and active state:

Touch the display with two fingers and then tap once with a third finger.

Switching between the different positions:

Tap three times with one finger on the Stats Monitor widget while it is visible.

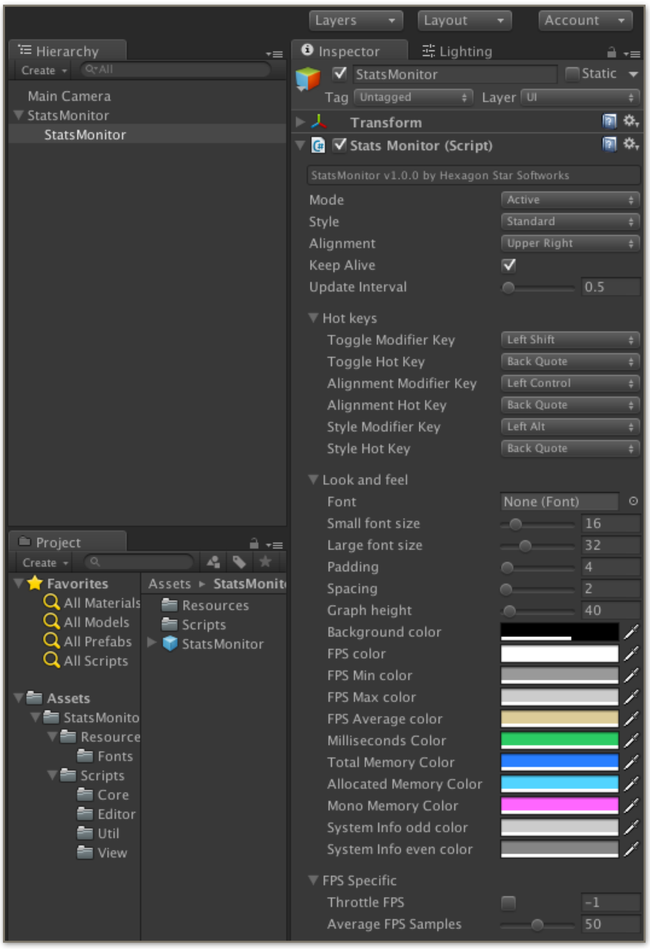
Switching between the different layout styles:

Touch the Stats Monitor widget with one finger and then tap three times outside the widget with a second finger.

Using the Component Inspector

All parameters of Stats Monitor can be adjusted in the included Component Inspector. The actual StatsMonitor script is wrapped into a container object so you will find the component inspector on the wrapped child object named **StatsMonitor**. The following image should clarify this.

TIP: You can adjust all parameters while the game is running and then take over your adjustments to be permanent by right-clicking on the Stats Monitor script name in the components inspector and choose ***Copy Component*** from the context menu. After that, stop your game, again right-click on the script name and choose ***Paste Component Values*** from the context menu.



☑ StatsMonitor □ Static

Tag Untagged Layer UI

Transform

☑ Stats Monitor (Script)

StatsMonitor v1.0.0 by Hexagon Star Softworks

Mode	Active
Style	Standard
Alignment	Upper Right
Keep Alive	☑
Update Interval	0.5
Hot keys	
Toggle Modifier Key	Left Shift
Toggle Hot Key	Back Quote
Alignment Modifier Key	Left Control
Alignment Hot Key	Back Quote
Style Modifier Key	Left Alt
Style Hot Key	Back Quote
Look and feel	
Font	None (Font)
Small font size	16
Large font size	32
Padding	4
Spacing	2
Graph height	40
Background color	
FPS color	
FPS Min color	
FPS Max color	
FPS Average color	
Milliseconds Color	
Total Memory Color	
Allocated Memory Color	
Mono Memory Color	
System Info odd color	
System Info even color	
FPS Specific	
Throttle FPS	□ -1
Average FPS Samples	50

Detailed Feature List

- **FPS Stats -** Displays detailed information related to the framerate:
  - The current frames per second.
  - The last lowest framerate (MIN).
  - The last highest framerate (MAX).
  - Calculated average framerate (AVG), with configurable average samples count.
  - The milliseconds it took for the game to render a frame (MS).
- **Memory Stats** - Displays memory-related stats:
  - Total Memory: Shows the total private memory amount which was reserved by the OS for the game. This memory can't be used by other applications as long as the game is running.
  - Allocated Memory: Shows the amount of private memory that is actually used by the game. While the Total Memory value is a 'pool' of reserved memory, the game doesn't necessarily use all of it all the time. Allocated memory is what the game currently uses.
  - Mono Memory: Shows the amount of memory that is used by Mono objects. This includes all the objects created by scripts.
- **SysInfo Stats** - Displays information related to the hardware the game is running on:
  - Operating System details.
  - The CPU and CPU cores.
  - GPU, Video RAM andRender API information.
  - System RAM.
  - Screen size & window dimensions.
- **Performance Graph** - The graph section logs FPS- and memory stats over time and is helpful in tracking FPS drops and memory spikes. It draws graphs for FPS, MS, Total Mem, Alloc Mem, and Mono Mem.
- **Widget Styles** - Stats Monitor can be switched between four different styles:
  - Minimal: Displays a small FPS counter only.
  - Stats Only: Displays only the textual FPS/Mem stats panel.
  - Standard: Displays the FPS/Mem stats panel as well as the graph panel.
  - Full: Displays the FPS/Mem stats panel, the graph panel, and the SysInfo panel.
- Switch between different widget positions via hotkey (Upper Left, Upper Right, Lower Right, etc.)
- Switch between different widget styles via hot key.
- **Customizable hot keys** for activating/deactivating the widget, switching between different widget positions, and switching between different styles (see Widget Styles feature). These functions can be configured to be triggered by a single key or additionally by a modifier key. This allows you to configure key combinations like for example SHIFT+Backquote or LCTRL +Backquote.
- **Modes** - Stats Monitor can be switched between three different operating modes:
  - Active: The stats monitor is visible and measures performance statistics.

  - Inactive: The monitor is not visible and doesn't measure anything. In this mode the monitor wont do anything except for checking for hot key input.
  - Passive: In this mode the stats monitor is not displayed but still measures performance in the background.
- **Framerate Throttling** - Allows you to set Stats Monitor to run the game at a specified maximum framerate. Useful for checking how the game performs at a specific framerate. Note that as long as throttling is enabled the game will disable VSync.
- **Keep Alive** - While enabled, prevents Stats Monitor from being destroyed on level load.
- **Configurable update interval** between 0.01ms and 10 seconds.
- **Component Inspector** - All options are configurable in the Stats Monitor component inspector.
- **Customizable Look** - Allows for customising font, two different font sizes (FPS counter & all other text), background gradient & transparency, text/graph colors, graph background color and transparency, padding, spacing, and graph height. Also included is the default-used font 'TerminalStats'.
- **Light-weight** - Stats Monitor has been developed for being a minimal, unobtrusive but versatile tool that doesn't consume any noticeable CPU cycles. The UI uses Unity's modern UI system and is very responsive.
- **FPS Warning and Critical Thresholds** - Two additional colors and FPS threshold values can be set to indicate framerates at very low ranges. These colors are also reflected in the graph.
- **Touch Controls** - Use Stats Monitor on supported touch display devices and easily toggle it on/off or switch between different positions and layout styles.
- **Auto-scaling** - By default Stats Monitor will scale its display depending on the device screen DPI. This keeps the widget at a readable size on high resolutions, like for example on Retina displays. Optionally the scaling can be set manually.

Version History

1.3.0

- Now displays stats for currently rendered objects, total render objects, and total game objects in a scene. The following values are displayed in this order:
  Currently Rendered Objects: These are all objects that are currently rendered by the camera.
  Total Render Objects: Totals number of objects in the scene that have a Renderer component.
  Total Game Objects: The total amount of game objects in the scene.
- Now displays the current Fixed Update rate. This value is displayed with the label FXD and displays the 'framerate' of Unity's currently set fixed update loop. Note that this is not really a framerate since the fixed update runs at a constant time but this value represents a comparable value to what the framerate of Fixed Update would be.

- The graph now tracks garbage collection by placing a GC blip onto the graph whenever garbage collection is executed by the system.
- The input controls (hotkeys and touch control) can now be disabled in case you want to control Stats Monitor's API via external input (e.g. with a thirdparty input manager like Rewired).

1.2.1

- Stats Monitor is now disabled in the editor hierarchy be default when the game is not running and enables itself when the game is launched. This is done to prevent interferences with other editor tools, e.g. ProBuilder.
- Several code changes and optimizations.
- Removed not used imports in some classes.

1.2.0

- Text and graph can now be outlined for making it stand out more in front of game graphics. Looks particularly good without background.
- The background image component will not be created anymore if alpha is set to zero.
- Added better API docs to public methods.
- Calculated properties are not set to public get only.
- Several code optimizations.

1.1.0

- Rewrote the view code to make it more efficient and smooth when switching between layout styles or toggling the monitor on/off.
- Added different update intervals for text displays and the graph so that the graph updates more frequently while the text can be updated at a lower frequency.
- Added scaling feature.
- Added auto-scaling functionality.
- Stats Monitor will now try to stay top-most as far as possible.
- Optimized the text layouting- and spacing code.
- Removed the background from the Minimal layout style.
- Stats Monitor now uses one background for all view parts.
- The background can now use a color gradient.
- The graph can now have its own background color.
- Added FPS Warning & Critical Threshold feature.
- Added Touch Control feature.
- Several minor bug fixes and optimizations.

1.0.0

- Initial release.

Links

Official Website: http://www.hexagonstar.com/products/unity-assets/statsmonitor/
Asset Store Link: https://www.assetstore.unity3d.com/#!/content/44870
Support Forum: http://forum.unity3d.com/threads/stats-monitor-performance-stats-graph-for-unity3d.351112/
API Docs: http://apidocs.hexagonstar.com/statsmonitor/