

## SOLUTION BRIEF

Intel® Developer Zone  
Photo Effects



# ENGINEERING MEETS ART



## Intel technology, harnessed by Auto FX Software's photo-enhancement solution, accelerates creative productivity for professionals and enthusiasts alike.

Creative professionals working with the leading image editing software have always been at the mercy of serial processing. Each individual pixel is rendered, one after another, until the image is complete. The processing of millions or billions of pixels is taxing on the CPU and takes multiple seconds to finish each time you apply an effect. These small but constant pauses add up to substantial lost time and can cripple creative flow, reducing productivity on all levels.

"GRFX Studio Pro is the world's first photo app built specifically, from the ground up, to target Intel's powerful processing hardware technology. We've taken the best enhancement techniques, developed over the last 25 years, and compiled them into a modern framework that will dramatically improve the user's workflow."

– Patrick H. Sutton, CEO Auto FX Software

Enter GRFX Studio Pro, by Auto FX Software. By designing their photo editing software around Intel's latest hardware advances, Auto FX Software has seen dramatically improved times from application launch to effects processing. The key lies in the available speed and power offered by Intel® SDK for OpenCL™ and Intel® Optane™ memory pinning. Intel® SDK for OpenCL™ allows the program to incorporate both the CPU and GPU simultaneously, making it possible to utilize parallel processing. "With parallel processing, all pixels in an image render more efficiently, whereby billions of pixel calculations can be processed in a fraction of a second," says Mr. Sutton. With vastly improved photo effects application speeds, artists can see their changes almost instantly, freeing them up to continue working in real time, without disruption.

Intel® Optane™ technology, widely used in the gaming world, finds a media application in GRFX Studio Pro. By targeting Intel® Optane™ memory pinning, GRFX Studio Pro significantly decreases load and batch processing times. That means photographers can import their JPG, PNG, BMP and RAW files and then add their personally generated digital photo effects to thousands of photos at once, creating multiple versions in multiple folders for easy viewing and fine-tuning going forward. The data crunching capability alone opens a world of time saving potential for working artists and photographers needing to make the most of their time and increase their bottom line profits.

### GRFX Studio Pro + Intel® SDK for OpenCL™ and Intel® Optane™ memory with pinning

- Simple, Intuitive Controls
- Dramatically Faster Processing
- Endless Enhancement Possibility

"The efficiency we have achieved in our app would not be possible without such excellent hardware technology. The magic happens as a result of our software working symbiotically with perfectly tuned Intel hardware."

–Patrick Sutton Auto FX CEO.



Figure 1. Leftside before, rightside after



**Figure 2.** Artificial Intelligence promises to take photo manipulation to the next level both in ease and effect. AI-based photo effects, soon to be available, will forever change your perception of reality.

## Making the Complicated Practical

Although Auto FX Software built GRFX Studio Pro with Intel hardware in mind, speeding things up, in this case, isn't limited to processing power. Auto FX Software is a respected name in image editing, with products widely used in professional media venues at the highest level. Their plugins and filters have long been industry favorites for improving the functionality and usability of the leading photo-editing software. With GRFX Studio Pro, Auto FX Software has created a photo editing solution that reinvents the process. By reimagining what editing software could be, they've cast off cumbersome, sequential controls in favor of a streamlined simplicity more common in a mobile app than a desktop editing suite.

By combining the best of the products developed over the last 25 years, GRFX Studio Pro gives users quick access to a wide variety of professional techniques, all with a single installation.

Traditional photo editing has been anything but intuitive. Mastering Adobe Photoshop takes years of dedicated study and practice, whether that includes a professional education or the use of abundant online tutorials. Each layer of editing is done sequentially, slowly, through a series of controls that must be learned and memorized by the user. GRFX Studio Pro is intuitive enough to be usable even for a novice. Many new users will recognize certain artistic photo effects which have been copied

over the years by different photo apps, such as turning photographs into paintings and cartoons with a simple click. Auto FX Software has long been a pioneer of making complicated photo-effects simple to execute.

## Turning Hobbyist into Artists, and Artists into Pros

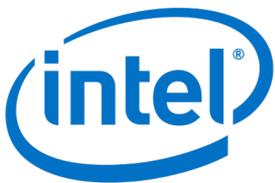
Auto FX Software has built the same tools and steps commonly used in Adobe Photoshop into effects algorithms. You can eliminate the many sequential steps seen in Photoshop with a few clicks from a clear, simple menu. The difference between GRFX Studio Pro and other "click and get" apps, is the inclusion of sliders for the fine-tuning of every effect. The speed of Intel® SDK for Open CL™ allows all of this to happen in real time, so that a creative professional can work more naturally. With GRFX Studio Pro, artists will be able to create nearly identical results as they could achieve in Photoshop, in a fraction of the time.

Removing the barriers of time and difficulty, GRFX Studio Pro is poised to change the game for creative professionals and amateur artists alike.

### Get It Now

Find GRFX Studio Pro in the Microsoft Store

Explore other standalone photo editing software and Photoshop plugins by Auto FX Software at [www.autofx.com](http://www.autofx.com). Learn more about Intel hardware and supported apps at <https://software.intel.com/en-us/home>



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Auto FX Software provided info based on direct information provided by internal clock data from CPU. July 2018 for latest build with live product demonstration video. The app was run on the computer without internet connection. Standard Microsoft Win 10 OS in conjunction with GRFX Studio Pro installed product. In September 2017 results seen live consistently during a more than 1 hour presentation with audience participation to determine their desired course of applying photo effects.

GRFX Studio Pro Minimum Requirements: Intel® 6thGen or newer CPU, Microsoft Windows 7 with service Pack 1, Windows 8, or Windows 10 (64-bit) version (Version 1709 or later), 8 GB of RAM (32 GB recommended), 4 GB of GPU VRAM recommended, 3.5 GB or more of available hard-disk space for 64-bit installation; additional free space required during installation. Intel® Optane™ memory Series 32GB M.2 80mm (recommended) for fasted batch processing. Fast internal SSD (recommended) for app installation and cache – plus provisional space for media, 1024 x 768 display (1920 x 1080 or greater display resolution recommended), 32-bit video card, Internet connection and registration are necessary for required software activation and access to other online services like training videos etc.

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