Affinity Photo Optimized to Run on 13th Gen Intel® Core™ Processors

HDR support and the new standard photo editing format, JPEG XL, raise the bar for professional photographers seeking top-notch images. With Affinity Photo v2, that goal is within reach with the added benefit of access to 13th Gen Intel Core processor capabilities.

> "Affinity Photo by Serif is tailored to work best on the latest machines, so we expect it will reach new heights of performance on the latest 13th Gen Intel Core processor series. Affinity Photo use the 24 advanced processor cores, the additional cache and the latest hybrid architectures to perform better than ever, unleashing capabilities like 8K HDR photo editing."[1]
>
> – Ashley Hewson,
> Managing Director, Serif

Affinity Photo Opens Opportunities for HDR Images

High Dynamic Range (HDR) image support for still photography has been slow to reach market, but barriers are coming down with the JPEG XL format availability and a slate of new high-performance processors from Intel. The new 13th Gen Intel Core Processor family makes an ideal complement to the Affinity Photo v2 photo editing application, taking maximum advantage of available CPU and GPU cores in a system.

Serif Affinity Photo has earned a strong following in the market, offering a viable alternative to Adobe Photoshop. The professional capabilities range from quick corrections and delicate retouching to large-scale batch processing and stitching of panoramic images. The latest version includes support for Intel Arc technology, as well as 12th and 13th Gen Intel Core processors, opening up numerous benefits when dealing with JPEG XL image formats, large file sizes, RAW files and the complexities of interfacing with HDR displays on mobile and desktop platforms.

The hardware format for monitors and displays associated with what is considered *true* HDR is HDR-10. HDR-10 allows machines running Windows 10 with an HDR-capable monitor or display (and also include game consoles and streaming video).

On the image side, the Joint Photographics Experts Group defined specifications for the format JPEG XL, which includes both lossy and lossless compression for still image files. Both the hardware and the software need to be capable of supporting the wide color gamut that is defined for HDR to achieve the fidelity of the imagery.

Tapping the Capabilities of Intel Graphics Technology

Intel engineering offered support during the development of Affinity Photo v2 to ensure that the necessary technical resources were readily available and also to participate in the testing of the program. Much of the focus involved optimization of the program to maximize efficient use of the latest Intel CPUs and GPUs. Adapting the program for running smoothly on the new hybrid architecture that defines the 12th and 13th Intel Core processors was also a primary objective.

To this end, the Intel VTune™ Profiler proved valuable in pinpointing bottlenecks and hot spots in the code to boost the overall performance of Affinity Photo. Performance gains within the program have been substantial.

AFFINITY
Photo

Enabling Technologies

In a continuation of the engineering goals of the 12th Gen Intel Core processors, the 13th Gen Intel Core processors include lower power consumption, increased clock speeds, and the addition of more cores. Integrated GPUs (A780 or A782h) add Intel Arc goodness to the mix.

Affinity Photo will be able to take advantage of a 15% improvement in performance when running single threads and a 41% performance improvement when running multiple threads. At the high end of the processor family, clock speeds of 6GHz can be achieved, with overclocking as high as 8GHz.

Highlights of Affinity Photo

Anyone familiar with Adobe Photoshop will find many corresponding features in Affinity Photo. Users can work with unlimited layers, diverse blend modes, RAW image files, multiple brush types, support for smart objects and more.

Support for JPEG XL

The addition of JPEG XL support is a major milestone for Affinity Photo v2. Professional photographers can take advantage of JPEG XL for producing images for the web or anywhere that a wider color gamut can be displayed. With high bit depth and high dynamic range, images can be generated with more detail in dark and light areas (unlike the tone mapping approach typical of earlier HDR efforts for still images).

Other features that JPEG XL format includes are:

- Support for alpha channels
- Animation
- Layers
- Thumbnails
- Lossless and progressive coding for a range of use cases
- Support for 360-degree images
- Large panoramas/mosaics

The image quality and compression ratios for JPEG XL are enhanced in comparison with standard JPEG. Fast. efficient encoding and decoding can be accomplished even on modest systems and mobile devices.

Key Features of Affinity Photo include:

- **Support for extremely complex vectors docs** used in high-end photography projects

- **Available as a single-payment purchase**, not a subscription

- **Live, real-time editing** for responsive photo production with fast rendering

- **Support for JPEG XL** for creating true HDR images

- **Optimized for 13th Gen Intel Core processor architecture** and Intel Arc graphics capabilities

- **Wide variety of studio presets for the UI layout** to accommodate different preferences and make work more efficient

- **Ability to open and edit** PSD and PSB files

Successful Collaboration

The co-engineering accomplished by Intel and the Affinity Photo team has resulted in a high-performing, professional-level tool that runs optimally on the latest Intel Core processor platforms.

Figure 1. Multiple images taken at different focal lengths can be merged and expertly aligned by Affinity Photo.

Resources

Technical Specs for Affinity Photo

Check the hardware requirements, supported operating systems for Mac, Windows and iPad configurations. This page also provides an overview of the performance improvements when using integrated Intel GPUs and lists the new features available in the latest version.

Learn more ›

Our Story: Serif, Maker of Affinity Photo

We started out in 1987 developing creative software for Windows and built up a decent suite of apps over a 20-year period. But there were problems. Apart from these legacy apps being locked into Windows, they were becoming bloated, hard to maintain and the core foundation of them was not built with consideration of the latest developments in hardware.

So, we decided to start again. We threw all that old code away and began development of the Affinity range from scratch. It was a big gamble and turned into a massive project — it took the best part of 5 years from writing the first line of cde to releasing Affinity Designer, our first Affinity app, in October 2014.

Since then we've not looked back. We've now got a full creative suite of applications covering photo editing, desktop publishing and graphic design, which have won the biggest awards available in the industry and have been adopted by over a million customers worldwide.

The success has been great, but our main focus remains on pushing the boundaries of what is possible with creative apps. We love doing what we do, and we are just getting started.

affinity.serif.com

intel.

1. *Placeholder for link.*
2. Ibid.