

Solution Brief

High-Performance Video Editing
Visual Computing



MAGIX Video Pro X14 Blazes New Performance Trails

Harnessing the power of Intel® Arc™ graphics technology, MAGIX Video Pro X 14 elevates performance to new levels and includes Intel Deep Link Hyper Encode capabilities for accelerated encoding.

“Here at MAGIX, we are excited to take advantage of the latest Hyper Encode technology. Thanks to the Intel Arc graphics platform, exporting a 4K video, for example, is now twice as fast with the latest releases of Movie Studio and Video Pro X, compared to previous versions. We also can't wait to present the powerful hardware-accelerated AV1 encode and decode to our customers. Our testing has shown that the Intel Arc A-series graphics crunches through AV1 video exports very efficiently.”

– Sven Kardelke, Chief Product Officer, MAGIX Software GmbH



Raw speed is a highly valued commodity in the video production world. Intel and MAGIX have worked together closely over many years to ensure that the hardware capabilities of each successive generation of processor are used to full advantage. For example, working in concert with Intel, MAGIX offered the first solution to incorporate hardware-accelerated encoding by means of the High-Efficiency Video Coding (HEVC) codec. More recently, the two companies have tapped the power of Intel Quick Sync Video (Intel QSV) to speed up the video editing production pipeline and minimize the long delays when encoding.

The latest engagement has brought enhancements to technologies at the heart of high-performance video production. Many of the improvements, based on features integral to Intel Arc graphics products, are enabled by the programming interface defined by Intel oneAPI Video Processing Library (Intel oneVPL), engineered to handle video encoding, decoding and processing in a portable, interoperable framework. This interface offers access to Hyper Encode acceleration, one of the most dramatic improvements in encoding performance in recent years.

Enabling Video Production Efficiency

Intel continues a long-term commitment to developing hardware platforms that deliver breakthrough performance to independent software vendors. The Hyper Encode feature delivers significant speedup of the encoding performance when using the encode engines of both an integrated and discrete GPU in a computer.¹

During the engagement with MAGIX, Intel tackled an ongoing problem — to discover why it was proving difficult to feed two GPUs in the internal pipeline fast enough to keep them both full. In the course of enabling the Hyper Encode feature, the engineers pinpointed existing problems that were slowing down single GPU encoding tasks. As a result, not only did MAGIX gain the benefits of accelerated encoding through Hyper Encode with two GPUs present, they were able to achieve faster encoding through a single GPU as well.

Throughout the video production sector, the AV1 codec is gaining wider adoption. Besides being royalty free, AV1 benefits video creators by generating smaller files without compromising quality, for easier storage and sharing. Full support for AV1 is provided in Intel Arc graphics products.

Matt Frost, chairman of the Alliance for Open Media (AOM) said, “AV1 allows you to capture higher resolution video using the same bandwidth and storage as earlier generation technology or capture the same resolution using even less storage. When you compare it with earlier technologies, like VP9 or HEVC, AV1 offers 20 to 30% gains. And when you compare it with the very common technologies, like H.264, AV1 offers well over 50% gains over those earlier technologies.”²

Technologies Forged in Hardware

MAGIX leveraged Intel video technologies built into the hardware of Intel-based systems, including those that incorporate solutions from the Intel Arc product family and the 12th Gen and 13th Gen Intel Core processors. MAGIX also capitalized on the media processing capabilities of Intel Quick Sync, which has been a feature of select Intel processor microarchitectures since January 2011.

Intel oneVPL was used to configure and optimize many of the video tasks and contributed to the high-speed encoding and decoding of video streams.

The Intel Arc Graphics architecture proved very efficient for operations involving OpenCL workloads, showing strong performance improvements. For example, the Gaussian blur effect, which removes unnecessary background from video content and reduces noise, runs substantially faster in a system with Intel Arc graphics.

Hyper Encode Performance Comparison

Figure 1 shows the results of a performance comparison that timed operations for the encoding and exporting of videos (see details of the configuration on the following page). Testing measured the time in seconds for Video Pro X14 to convert from 4K60 AVC to 4K60 HEVC. Using Intel Deep Link Hyper Encode, engaging both the Intel Arc Graphics and Intel UHD770 Graphics, yielded up to 1.45x faster performance versus the competition.³

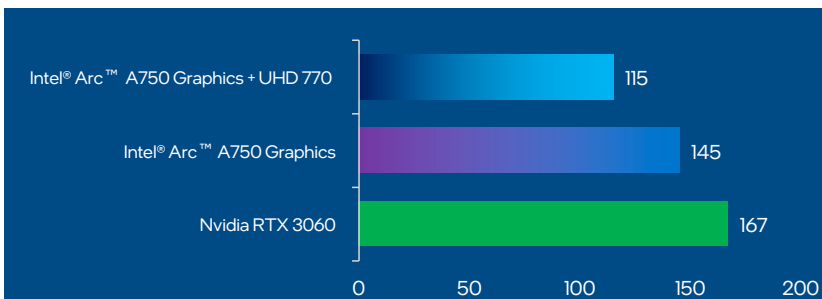


Figure 1. Performance comparison demonstrating Hyper Encode speedup.

Highlights of Video Pro X

The features of Video Pro X are aligned with requirements of professionals in the video production sector, but also amenable to amateurs and prosumers gaining proficiency with video editing techniques. MAGIX also has an entry-level offering by subscription, Movie Studio, available at three different tier levels. Movie Studio includes many of the performance benefits of Video Pro X, but a more modest feature set.

Video Pro X14 is available for a single purchase fee or by subscription, with or without access to a library of digital assets, including stills, video clips and music.

Many program enhancements were added to this release, providing rich opportunities for creatives to produce captivating video content. An effects bundle, NewBlue Total FX, provides striking visual effects, such as image optimization to sharpen video content, chroma key, color correction looks and filters, titling and other creative effects.

Outstanding Features of MAGIX Video Pro X include:

- **The new, fast, responsive timeline** makes navigating and editing very large projects substantially faster.
- **Better methods for finding video effects**, transitions and templates simplifies production tasks, making vital assets more accessible through multiple search methods.
- **Access to a rich content library**, offered through subscription, extends creative production options, featuring stock video and animations, music and sound effects.
- **New options for building MAGIX Travel Maps** take advantage of animated design elements, flexible handling of GPX data and varied view angles.
- **Plugins, part of the NewBlue Total FX package**, add valuable presets and post-production components to enrich video projects.
- **Integration of Intel Hyper Encode capabilities** makes GPUs available to dramatically shorten rendering times. This feature supports the full range of discrete and integrated Intel Arc graphics solutions.

From over 30 years of experience in the TV industry and as an editor, I know how important it is to work with editing software that's both quick and easy to use and has all the features I need to create high-quality video.¹⁴

– Franco Aversa, Video Producer

Resources

MAGIX Video Pro X

A prime focus of Video Pro X is demystifying video editing and much of the program is focused on making tasks straightforward and intuitive. A free trial version of the software can be downloaded from the site to help users get a feel for the application and try out the feature set.

[Learn more ›](#)

Intel Create and Intel Arc Graphics

Expand your creative skills and learn more about the latest Intel Graphics technologies, including Intel Arc and the ways it has enhanced the performance and capabilities of many applications that empower artists, animators, filmmakers, and photographers.

[Learn more ›](#)

SEE. HEAR. FEEL. CREATE

MAGIX believes in the power of video and audio. For 25 years, we have been creating cutting-edge software for a global audience. Our award-winning SaaS solutions help 35 million people and thousands of broadcasting companies all over the world to tell their stories, to promote their brands or to create stunning soundtracks and movies. We place value on outstanding solutions for the creation, design, presentation and archiving of digital photos, graphics, websites, video and music.

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| Hyper Encoding Up to 1.45x Faster Than the Competition | | | | |
|--|---|--|--|----------------------------|
| Specifications for Workloads and Configurations | | | | |
| Claim | GPU(s) | System Configuration | Measurement | Period |
| <p>Hyper Encode</p> <p>Intel Arc 750 + Intel UHD Graphics 770 graphics delivers faster content creation compared to Intel Arc A750 or graphics alone. Performance also shown versus competitive products.</p> | <p>Intel Arc A750 Graphics</p> <p>Nvidia GeForce RTX 3060</p> | <p>ARC Configuration: Intel® Core™ i9-12900K, Asus ROG MAXIMUS Z690 Hero, BIOS: 1601, Integrated Graphics: Intel® UHD Graphics 770, Integrated Graphics Driver: 30.0.101.3276, Discrete Graphics: Intel® Arc™ A750 Graphics, Discrete Graphics Driver: 30.0.101.3276, Memory: 32GB (2x16GB) DDR5 @ 4800MHz, Storage: Corsair MP600 PRO XT 40001GB, OS: Windows 11 Pro v21H2 Build 22000.856</p> <p>Competitor Configuration: Intel® Core™ i9-12900K, Asus ROG MAXIMUS Z690 Hero, BIOS: 1601, Discrete Graphics: EVGA GeForce RTX 3060 XC GAMING, 12G-P5-3657-KR, Discrete Graphics Driver: 516.94, Memory: 32GB (2x16GB) DDR5 @ 4800MHz, Storage: Corsair MP600 PRO XT 40001GB, OS: Windows 11 Pro v21H2 Build 22000.856</p> | <p>The MAGIX Video ProX workload measures the time it takes (seconds) to go from a 4K/60fps AVC video to a 4K/60fps video using the Balanced setting.</p> <p>The comparison for the claims is using (1) Arc A750 alone (dGPU) and (2) Arc 750 with UHD Graphics 770 (GPU) to encode vs. Nvidia RTX 3060.</p> <p>Magix Video Pro X14: 20.0.3.169 (UDP3)</p> | <p>Sep 5 - Sep 7, 2022</p> |



1. Intel Deep Link Technology website. "Hyper Encode: Less Time Waiting and More Time Doing." <https://www.intel.com/content/www/us/en/architecture-and-technology/adaptix/deep-link.html>
2. Intel Chip Chat video. "Hardware-accelerated AV1 Video Encoding | Intel Chip Chat ep. 717" (May 2022), <https://www.youtube.com/watch?v=PH-N8zwCs8k>
3. Refer to the table above for full details on workloads and configurations for Hyper Encode performance claims.
4. MAGIX Video Pro X website. "Video Pro X, Intuitive Video Editing with Professional Tools." <https://www.magix.com/us/video-editor/video-pro-x/>

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