

Accelerate HD workflows with native 64-bit support in CS5 Production Premium



Adobe Creative Suite 5 Production Premium combines:

- Adobe Premiere Pro CS5
- Adobe After Effects® CS5
- Adobe Photoshop® CS5 Extended
- Adobe Illustrator® CS5
- Adobe Flash Catalyst™ CS5
- Adobe Flash® CS5 Professional
- Adobe Soundbooth® CS5
- Adobe OnLocation® CS5
- Adobe Encore® CS5

Additional components:

- Adobe Dynamic Link
- Adobe Bridge CS5
- Adobe Device Central

Integrates with new Adobe CS Live online services*.

*CS Live online services are complimentary for a limited time. See www.adobe.com/go/CSLive for details.

Today's video production workflows benefit tremendously from the additional RAM access 64-bit operating systems offer. Taking advantage of this technological advance, native 64-bit OS support in Adobe Premiere Pro CS5, After Effects CS5, and Photoshop CS5 makes working on HD content more fluid—so you can deliver completed projects faster or gain more time to be creative with CS5 Production Premium.

Speed your production workflow with native 64-bit support

Craft video productions, motion graphics, visual effects, and interactive experiences with high-performance, industry-leading 64-bit tools in Adobe CS5 Production Premium. Finish HD projects faster thanks to native 64-bit support in Adobe Premiere Pro, After Effects, and Photoshop Extended and the new Mercury Playback Engine in Adobe Premiere Pro.

In Adobe Premiere® Pro CS5, the revolutionary native 64-bit, CPU- and GPU-accelerated Mercury Playback Engine provides rock-solid performance and stability so you can edit complex, high resolution projects fluidly. Native 64-bit support in After Effects® CS5 lets you take advantage of all available RAM on any number of processor cores to work on large frames, preview deeply-layered floating-point color composites, and quickly craft complex 3D scenes and camera moves. Photoshop CS5, Adobe Media Encoder CS5, and Lightroom also offer native 64-bit OS support, and other CS5 applications are tested on 64-bit operating systems.

The majority of video professionals have already transitioned to 64-bit operating systems, including Mac OS X Leopard, Snow Leopard, or 64-bit versions of Windows® Vista® and Windows 7 operating systems. The CS5 releases of After Effects and Adobe Premiere Pro require 64-bit operating systems.

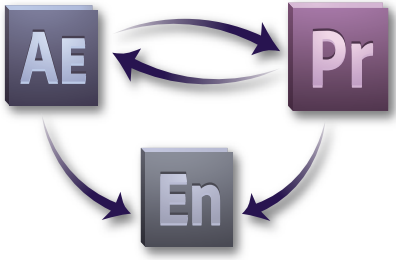
Why 64-bit operating systems matter in video production

Today's film and video productions increasingly require HD and higher resolutions, and video professionals need real-time responsiveness to deliver creative work on ever-tighter deadlines. Today's powerful 64-bit operating systems make the computing power central to today's film and video workflows accessible to applications. Access to more RAM makes it possible for video production applications such as After Effects CS5 and Adobe Premiere Pro CS5 to work smoothly on high-resolution content.

Shrinking budgets, tighter deadlines, and increasingly powerful software means you're more likely to wear multiple hats on every production. 64-bit systems provide a better experience when switching between applications, making it easier to perform multiple tasks simultaneously. And because you spend less time waiting, it's easier to maintain your creative momentum—which means you can deliver quality content more quickly.

A number of key trends in video technology and video production will make 64-bit operating systems even more important moving forward:

- As the native resolution of cameras continues to increase, so do the bandwidth requirements—multiple layers or multiple streams of video increase demands at a higher rate. Only a 64-bit operating system can keep up with these demands.
- As color depth requirements increase, data rates increase dramatically. For example, a 4:4:4 12-bit file requires three times the bandwidth of a 4:2:0 8-bit file of the same resolution.



When Adobe Premiere Pro is installed as part of Production Premium, use Dynamic Link to eliminate intermediate rendering when exchanging Adobe Premiere Pro sequences and After Effects compositions or sending sequences or compositions to Encore. Make changes in one application and see it update immediately in the other.

- As producers become ever more cost conscious, 64-bit systems can allow producers to shave time from schedules by handling more tasks in parallel.
- As standards rapidly evolve, content creators must work at high resolutions throughout production to meet the quality requirements for distribution. HD is increasingly common, even for web-based video distribution. Popular video websites now offer HD content.

Adobe Premiere Pro CS5 and After Effects CS5 natively support 64-bit operating systems, and as a result are able to use large amounts of RAM. Consider a typical workflow in CS5 Production Premium, where the additional RAM access 64-bit OS support enables you to perform several of these tasks in parallel without compromise:

- Compositing in After Effects
- Editing HD content in Adobe Premiere Pro
- Using After Effects compositions in a Adobe Premiere Pro sequence through Dynamic Link
- Encoding a Adobe Premiere Pro sequence in the background with Adobe Media Encoder
- Burning a Blu-ray disc in Encore using Adobe Premiere Pro content through Dynamic Link

Thanks to native 64-bit OS support in CS5, you can use as much available RAM as required for each task, without compromising the performance of other applications. Additionally, suite level memory management enables you to manage RAM between these Production Premium components. This translates into better editing and compositing interactivity, particularly for work on high-resolution content or when editing complex projects.

Breakthrough performance with the new Mercury Playback Engine in Adobe Premiere Pro CS5

The ability to edit HD and higher resolution footage in real time without having to first render it or lower its resolution by transcoding or rewrapping it with an intermediate codec is a post-production dream come true. Adobe Premiere Pro CS5 brings that dream to the desktop with the revolutionary Mercury Playback Engine.

The Mercury Playback Engine provides native 64-bit, GPU-accelerated support for Mac and Windows, yielding dramatic improvements in performance and stability. You can open projects faster, scrub through HD and higher resolution projects fluidly, and handle long-form content and effects-heavy sequences more reliably. Play through most common transitions and effects without waiting for rendering. Plus, you can usually see results instantly when performing multiple color corrections and tasks such as keying with Ultra, applying Gaussian blurs and blend modes to footage, and working with numerous other effects. The Mercury Playback Engine also makes rendering for final output much faster than before.

The enhanced, native 64-bit system architecture in Adobe Premiere Pro CS5 lets you use all available system RAM (up to 128GB in today's computers), so you can run multiple software applications at the same time. This opens the door to powerful time-saving, multitasking workflows. For example, you can simultaneously edit a very complex, effects-laden project in Adobe Premiere Pro while your system's CPUs render an elaborate After Effects composition in the background.

The Mercury Playback Engine leverages the parallel compute engine in NVIDIA graphics processing units (GPUs) to solve many complex computational problems in a fraction of the time a CPU would take to perform the same task.

In addition, the Mercury Playback Engine takes multitasking to a new level. Utilizing the GPU to accelerate effects, rendering, and other processor-intensive tasks frees your system's CPU to handle background tasks. If you are working on a computer or laptop that is unable to play back challenging footage such as 4K RED files or sequences with vast numbers of effects, Adobe Premiere Pro CS5 includes the ability to adjust the playback resolution of your video in the Source or Program Monitors. Separate Playback and Pause resolutions give you more control over

Supported NVIDIA GPUs for the Mercury Playback Engine:

- Quadro CX (Windows)
- Quadro FX 3800 (Windows)
- Quadro FX 4800 (Mac and Windows)
- Quadro FX 5800 (Windows)
- Quadro 4000 (Windows)
- Quadro 5000 (Windows)
- GeForce GTX 285 (Mac and Windows)
- GeForce GTX 470 (Windows)

Please see www.nvidia.com for card system requirements and compatibility.

The list of graphics cards that are compatible with Adobe Premiere Pro CS5 will be updated on a regular basis. For the most up-to-date list, please see www.adobe.com/go/64bitsupport

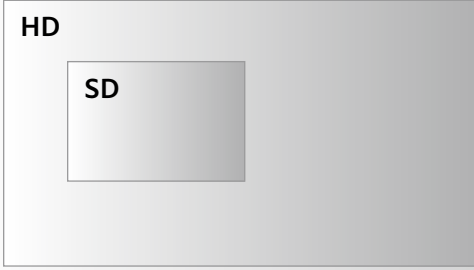
monitoring—with higher resolution footage, you can set playback resolution to a lower value for smooth playback (for example, ½, 1/4, 1/8, 1/16 resolution), and set Pause resolution to Full. This allows you to quickly check the quality of focus or edge details when playback is paused—useful for when you don't have the luxury of an on-set HD monitor.

Benefits of native 64-bit support in Adobe After Effects CS5

One of the most significant advances in After Effects CS5 is that it is now a fully native 64-bit application. This yields numerous advantages, including the ability to fully use your computer's memory and dramatic improvements when working on high-resolution projects.

Just a few years ago, it was normal to work on standard-definition video at a color depth of 8 bits per channel (bpc). Today, it is not uncommon to work on high-definition video at a depth of 16 bpc. And while some artists have used After Effects on film projects since the earliest versions, digital cinema cameras such as the RED One are now commonly in use—making 4K images in 32-bit floating-point color increasingly common. And the memory demands don't stop there. For example, RED has announced cameras that sport 5K, 6K, 9K, and even 28K frame sizes. Native 64-bit OS support in After Effects CS5 means you can work on ever-higher-resolution projects with confidence.

4K



HD

SD

Memory requirements

standard definition
720x486 pixels x 4 color channels* x 8 bpc
1.33 megabytes/frame
10 seconds @ 29.97 fps = 398.6MB

high definition
1920x1080 pixels x 4 color channels* x 16 bpc
15.82 megabytes/frame
10 seconds @ 23.976 fps = 3.7GB

digital cinema
4096x2304 pixels x 4 color channels* x 32 bpc
144 megabytes/frames
10 seconds @ 24 fps = 33.75GB

(* 4 color channels = red/green/blue/alpha)

On 32-bit operating systems, the 2- to 4-gigabyte application memory restrictions sharply limit how many image frames can be held in RAM at the same time—which in turn constrains the length of full-motion previews and the complexity of projects overall. Even with disk caching and virtual memory, using older versions of After Effects on 32-bit OSes means you may be forced to wait while images are swapped in and out of RAM or re-rendered the next time they are needed. Resourceful artists have developed strategies to work around these limitations—such as working at lower resolutions or frame rates or using "proxies" of lower-quality sources—but these come with the trade-off of not seeing your composition in its final form while you work.

With After Effects CS5, these limitations no longer apply. Support for 64-bit operating systems means After Effects CS5 can access all of your computer's installed RAM. This has a dramatic positive effect on the type, size, and complexity of projects you can take on—as well as how fluidly you can work. With After Effects CS5 running on a 64-bit operating system with 32GB of RAM, you can preview a 30-second HD comp at full resolution and at 32 bpc. This enables you to preview your entire composition at maximum fidelity without interruption.

Beyond being able to preview longer continuous stretches of your project, rendered image frames are more likely to be kept in memory, allowing you to move around a project's timeline or between compositions without losing already-rendered frames. Additionally, memory buffer errors due to RAM constraints are virtually eliminated. These improvements increase productivity, which in turn facilitates creativity.

Benefits of 64-bit support in Adobe Photoshop CS5 and Lightroom

Megapixel counts continue to rise in still-image cameras and photographers increasingly edit raw image files at 16 bits per channel or higher, often combining them into even larger layered, HDR, or panoramic documents. All of these trends place new demands on computing hardware. Native 64-bit support in Photoshop Extended makes it easier and faster to edit very large images by taking full advantage of available RAM. When running on 64-bit Mac OS X, Windows Vista, or Windows 7 operating systems, Photoshop CS5 Extended can use up to 32GB of RAM on desktop computers and up to 8GB of RAM on notebook computers. With supported video cards, you can work more fluidly with GPU-accelerated features such as panning, zooming, canvas rotation, a new interactive color picker, and Adobe Pixel Bender™ technology for customized filters and effects. In addition, Photoshop Lightroom® software supports 64-bit processing, utilizing the advanced memory handling capabilities on the latest Mac OS and Windows systems.

Photoshop users will be able to perform day-to-day imaging tasks faster, and process very large images at least 10 times faster. (Requires a 64-bit-capable computer with a 64-bit version of Mac OS, Microsoft® Windows® 7, or Windows Vista®. Actual performance increase will vary depending on the drivers you have installed, the feature you're using, and other factors.) This gain is because 64-bit applications can address larger amounts of memory, resulting in less file-swapping—one of the biggest factors that can affect data processing speed.

Save time with the native 64-bit Adobe Media Encoder CS5

Similar to Compressor, Adobe Media Encoder is a separate, 64-bit software application that saves you time by automating the process of creating multiple encoded versions of your source files and Adobe Premiere Pro sequences. Adobe Media Encoder is part of Adobe Premiere Pro, and features an intuitive user interface that provides visual feedback on your encoding process. You can set up multiple items for batch encoding, manage priorities, and control advanced settings for each item individually. Batch encoding lets you use any combination of sequences and clips as sources and encode to a wide variety of video formats, including FLV, F4V, Windows Media, QuickTime, and other popular codecs such as MPEG-2, MPEG-4, H.264, AVC-Intra, and DPX.

FAQ: Adobe support for 64-bit operating systems

Q. Why did Adobe make the decision to support only 64-bit operating systems with Adobe Premiere Pro CS5 and After Effects CS5?

A. By optimizing code for 64-bit operating systems, Adobe is able to deliver the performance gains video professionals require. Creative Suite customers benefit from working on the latest hardware and operating systems, and the majority of video professionals have already transitioned to 64-bit capable systems, such as Mac OS X Leopard, Snow Leopard, or 64-bit versions of Windows (Vista, Windows 7). After optimizing and architecting three versions of Adobe Premiere Pro and After Effects software for 64-bit systems, Adobe Premiere Pro CS5 and After Effects CS5 now offer native support for 64-bit operating systems. Because 64-bit operating systems offer superior performance, CS5 and future releases of these products will not support 32-bit operating systems. For an up-to-date list of 64-bit 3rd party plug-ins for After Effects, visit <http://www.adobe.com/products/plugins/aftereffects/>.

Q. I use a 32-bit version of Windows, and just purchased Adobe CS5 Production Premium. What should I do?

A: On Windows, Adobe® Premiere® Pro CS5 and Adobe After Effects® CS5 require a 64-bit edition of Microsoft Windows Vista® or Windows 7®. If you are using the following operating systems, you will not be able to install or run Adobe Premiere Pro CS5 or After Effects CS5:

- 32-bit and 64-bit editions of Windows XP Home or Professional.
- 32-bit editions of Windows Vista Home Premium, Business, Ultimate, or Enterprise.

If you are using one of the listed incompatible operating systems, Adobe recommends that you upgrade to either 64-bit editions of Windows Vista Home Premium, Business, Ultimate, or Enterprise or 64-bit editions of Windows 7 Home Premium, Professional, or Ultimate.

Adobe has included complimentary versions of Adobe Premiere Pro CS4 and After Effects CS4 (which both support 32-bit OSes) with your purchase of CS5 Production Premium for you to use until you upgrade to a recommended operating system.

For more information and detailed installation instructions for CS5 Production Premium, please refer to the Readme located on your Creative Suite Application Disc 1 or visit www.adobe.com/go/32bit_installation.

For more information on recommended hardware configurations, please visit www.adobe.com/go/32bitsupport.

Q. What's the difference between 32-bit and 64-bit operating systems?

A. 64-bit operating systems offer a wider address system and data path, providing access to essentially unlimited RAM. On 32-bit systems, each application is limited to 4GB of RAM (and in practice this number is actually smaller). More RAM means applications can manipulate larger chunks of data, cache more information, and handle a wide range of tasks more efficiently.

Q. What do I need to do to upgrade to 64-bit operating system on a Mac?

A. Mac OS Leopard and Snow Leopard are already 64-bit capable and ready to use additional memory. All you need to do is add more RAM to start seeing the benefits of native 64-bit OS support in After Effects CS5 and Adobe Premiere Pro CS5.

Q. What do I need to do to upgrade to 64-bit operating system on Windows?

A. When you install 64-bit Windows Vista, make sure your hardware drivers are available for the 64-bit edition. Specific Windows Vista 64-bit drivers are necessary to run the hardware — 32-bit drivers do not work. In addition, you must have Service Pack 1 installed on Windows Vista to run CS4.

When you install Windows 7, choose the 64-bit version.

Q. What are Adobe's plans for the other components of Creative Suite? Will the rest of Adobe Creative Suite be 64-bit native on Mac OS and Windows?

A. Adobe continues to prioritize 64-bit support based on the potential user benefits and the complexity of the code transition. At this time, After Effects CS5 and Premiere Pro CS5 are the only products that are 64-bit only.

Q. I am running earlier versions of After Effects and Adobe Premiere Pro software on a 32-bit operating system. What are my options for upgrading to Creative Suite 5?

A. Adobe has a number of upgrade paths available to current Creative Suite customers. Visit www.adobe.com/products/creativesuite/upgrade for full details on your upgrade options.

Q. Will Adobe continue to support the version of Adobe Premiere Pro or After Effects that I am currently running on a 32-bit system?

A. Adobe plans to continue offering support according to the existing complimentary and paid support programs. For details on these programs, visit www.adobe.com/support/main.html.

Q. What are the recommended system configurations for video production?

A. With native 64-bit applications, more RAM means better performance when working with multiple applications on high-resolution projects. For that reason, we recommend you use 8GB RAM, with 16GB, 32GB, or even more for high-performance configurations.

Q. Where can I go for up-to-date information on this topic?

A. Please visit www.adobe.com/go/64bitsupport.



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