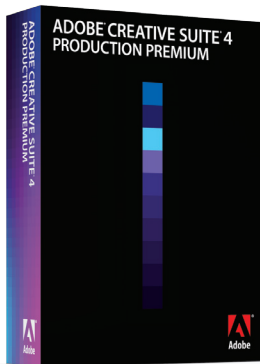


# ADOBE® CREATIVE SUITE® 4 PRODUCTION PREMIUM

Take advantage of 64-bit operating systems today



**Adobe Creative Suite 4  
Production Premium combines the  
full new versions of:**

- Adobe After Effects® CS4
- Adobe Premiere® Pro CS4
- Adobe Photoshop® CS4 Extended
- Adobe Flash® CS4 Professional
- Adobe Illustrator® CS4
- Adobe Soundbooth® CS4
- Adobe OnLocation™ CS4
- Adobe Encore® CS4
- Adobe Device Central CS4
- Adobe Bridge CS4
- Adobe Dynamic Link

Modern production workflows benefit tremendously from applications such as Adobe CS4 Production Premium that are architected and optimized for 64-bit operating systems. HD workflows can show 50% to 200% speedup moving from 32-bit with 4GB of RAM to 64-bit with 16GB of RAM<sup>1</sup>.

Performance gains include increased editing speed, rapid switching among tools and faster rendering - all of which give you more time to be creative. Digital Content Producer Online's Jan Ozer tested CS4 Production Premium on both 32-bit and 64-bit systems and his "rendering trials clearly show that a 64-bit system will deliver superior performance with most formats"<sup>1</sup>.

This means that, with Production Premium CS4, moving up to 16GB of RAM could be the best ROI investment you make in productivity this year since 16GB of RAM typically costs under \$500.

**Adobe's 64-bit support:**

- All Adobe® Creative Suite® 4 applications are tested on 64 bit operating systems (OS).
- Photoshop® CS4 software offers native 64-bit support for Microsoft® Windows® Vista now. Native 64-bit support on Mac OS is coming in a future release.
- Photoshop Lightroom® 2 software supports 64-bit processing, utilizing the advanced memory handling capabilities on the latest Mac OS and Windows systems.
- After Effects® CS4 software is architected and optimized for 64-bit operating systems.
- Adobe Premiere® Pro CS4 software is architected and optimized for 64 bit operating systems.
- Photoshop, After Effects, and Adobe Premiere Pro are architected for 64-bit today, and will be further optimized in future releases (for both Mac OS and Windows Vista).

**Why 64-bit operating systems matter in video production**

Digital video production's demand for computing power—necessitated by increasingly high resolutions and the expectation of real-time responsiveness—is making 64-bit operating systems a core component of the modern editing workflow. The number of processing cores per CPU continues to increase, as does the amount of RAM (32GB or more in some cases) each can access.

<sup>1</sup> Please see Jan Ozer's articles "CS4 and 64-bit systems [Part 1](#) and [Part 2](#)" in Digital Content Producer Online for more details about his 64-bit benchmarking results.

Simple table on how much per core:	
Simplified Scenario	Good Memory Range
SD Single App	2GB -> 4GB
HD Single App	4GB -> 8GB
SD Workflow	4GB -> 8GB
HD Workflow	8GB -> 16GB

Video production is inherently multi-disciplinary, and shrinking budgets and increasingly powerful software mean production specialists in every area are stretching beyond their core strengths to handle other aspects of a production. Because 64-bit systems make it possible to run many applications simultaneously while maintaining real-time playback, they can speed the production process considerably by providing instant access to a broad array of creative options. For hands-on users, the benefits are tangible—64-bit systems make it possible to maintain creative momentum throughout the process of creating and refining productions, which translates into both a more enjoyable working process and higher-quality results.

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 OS 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.
- As producers become more cost-conscious, 64-bit systems can allow producers to shave time from schedules by handling more tasks in parallel.
- Rapidly evolving standards mean that content creators must work at high resolutions throughout production in order to meet the quality requirements for distribution. High definition is increasingly common, even for web-based video distribution. Popular video web sites now offer HD content.

#### Take advantage of 64-bit operating systems today with Production Premium CS4

When you use Adobe Creative Suite 4 Production Premium on a 64-bit OS, you can expect to see tangible benefits right away:

- Faster editing performance in Adobe Premiere Pro, especially when working with high resolution files.
- Better multi-core rendering and longer RAM previews in After Effects.
- Run multiple components in Production Premium CS4 simultaneously, and leverage new integration like Dynamic Link to move content between them.
- Faster performance in native 64-bit Photoshop® (on Microsoft Windows Vista), especially when working with extremely large .PSD files.
- Projects can scale further in resolution and complexity, taking advantage of the additional available memory.
- Background processes run more efficiently.

Adobe Premiere Pro CS4 and After Effects CS4 have been re-architected for 64-bit operating systems to use large memory more effectively (up to 20GB of memory for Adobe Premiere Pro alone, up to 64GB of memory for a large Production Premium workflow).

Photoshop CS4 is native 64-bit on Windows Vista today, and Photoshop Lightroom 2 supports 64-bit processing on both Mac OS and Windows systems—further increasing the 64-bit performance pay-off. In early testing of 64-bit Vista support in Photoshop, we have observed overall performance gains in the range of 8-12%. Those who work with extremely large files may realize noticeably larger gains in performance, in some cases as dramatic as 10 times the previous speed. This is because 64-bit applications can address larger amounts

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of memory, and thus result in less file-swapping—one of the biggest factors that can affect data processing speed.

Consider a typical workflow in Production Premium CS4, where at any given time you might be doing several of these tasks in parallel:

- Compositing in After Effects
- Editing HD content in Adobe Premiere Pro
- Using compositions created with After Effects in the Adobe Premiere Pro timeline via Dynamic Link
- Encoding a sequence from Adobe Premiere Pro in the background with Adobe Media Encoder
- Burning a Blu-ray Disc in Encore using content imported via Dynamic Link from Adobe Premiere Pro.

These five concurrent activities initiate approximately ten processes, each of which can use a separate 4GB chunk of memory. Thanks to 64-bit optimization, Production Premium CS4 helps you spend less time switching between applications and waiting for memory to page back in from disk. With more memory available for frame caching, played content is available in the cache longer, and it gets swapped out for more recently played frames. This translates into better editing interactivity, particularly for detail work on high resolution content or when editing complex projects.

#### Adobe's plans for further 64-bit optimization

Adobe has consistently focused on architecting and optimizing for leading edge systems with a particular focus on the system size and power that we expect to see in our user base, using Moore's law to predict user system trends.

	Common Workflow	Higher End Common	Memory Range	
			80% Over	80% Under
2004	SD	HD	1GB	6GB
2008	HD	2K, 4K, RAW	2GB	16GB
Future	4K	8K and more, Stereo, Higher bit dept	8GB	64GB

*Adobe Premiere Pro CS4 and After Effects CS4 are architected and optimized for the range of 2GB to 16GB of memory - supporting Production Premium workflows that show strong performance benefits at 16GB of memory or more.*

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In the labs, we're hard at work on versions of Production Premium that are architected and optimized for higher CPU and core counts with more memory—opening the door for even more demanding workflows. We do this with confidence that every year our users will have system profiles that continue to increase in capability.

One thing is clear—when you buy new hardware it's an easy decision to buy a 64-bit system and ensure you have headroom in RAM to leverage the power and scalability of Production Premium CS4.

Additionally, most tower systems available since 2006 and most laptops available since 2007 are 64-bit capable, so you may be able to experience the 64-bit performance boost today simply by upgrading your OS and adding more RAM.

## FAQ

### What are the recommended system configurations?

For high-end workflows, more memory benefits performance significantly, making a 64 bit OS essential. CS4 Production Premium is architected for 64-bit and as a result, a 64-bit OS with lots of memory makes the work really flow. From our experience, these guidelines will help you, although your mileage will vary:

	Premiere Pro	After Effects	Production Premium
Solid Baseline Workflow	4GB	4GB	4GB
Performance Configuration	8GB	8GB	16GB
Memory rarely an issue	16GB	16GB	32GB

### What does this mean for you?

Most laptops only take 4GB of memory. We've got a solid workflow there, but if you can put in more memory, you're very likely guaranteed to see performance gains.

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

The basic difference between a 32-bit OS and a 64-bit OS is that the entire address system and data path are 64-bits wide versus 32-bits wide. This allows the system to move data around in larger chunks and, importantly, provides access to essentially unlimited memory, where a 32-bit system is limited to 4GB (and in practice this number is smaller).

*One thing is clear—when you buy new hardware it's an easy decision to buy a 64-bit system and ensure you have headroom in RAM to leverage the power and scalability of Production Premium CS4.*

### What do I need to do to upgrade to 64-bit on a Mac?

Mac OS Leopard is already 64-bit capable and ready to use additional memory. All you need to do is upgrade the memory to start seeing the benefits.

### What do I need to do to upgrade to 64-bit on Windows?

When you install 64-bit Vista, make sure that your hardware drivers are available for the 64-bit edition of Vista. Specific Vista 64-bit drivers are necessary in order to run your hardware - the regular 32-bit drivers won't work.

Also, it's good practice to update to the latest versions of your software. For Vista, get Service Pack 1. For Adobe software, be sure you are using Adobe Premiere Pro 4.0.1 and After Effects 9.0.1.

Also, make sure your copy of Vista has SP1 installed. Service Pack 1 is required for CS4, and you really don't want to be running Vista without it.

Once you have everything in place—64-bit Vista running, drivers installed, CS4 installed—here are some tips to maximize performance:

- For Adobe Premiere Pro, make sure you have 4.0.1 version, since some of these changes were added in the free incremental update. Adobe Premiere Pro will now utilize more

The Windows version of Adobe Creative Suite 4 Production Premium requires Microsoft® Windows® XP with Service Pack 2 (Service Pack 3 recommended) or Windows Vista® Home Premium, Business, Ultimate, or Enterprise with Service Pack 1 (certified for 32-bit Windows XP and 32- and 64-bit Windows Vista†)

The Mac version of Adobe Creative Suite 4 Production Premium requires Multi-core Intel® processor and Mac OS X v10.4.11–10.5.4

For updates to system requirements and more detailed information about video hardware compatibility, visit [www.adobe.com/products/creativesuite/production/systemreqs](http://www.adobe.com/products/creativesuite/production/systemreqs).

than 4GB of RAM in the system by making multiple instances of itself each time 4GB has been used.

- For After Effects, you'll want to go into the Preferences - Memory & Multiprocessing panel, and adjust the amount of memory per core. After Effects will also instance itself, but it does this per CPU core, and each core can utilize 4GB.

### **Will the rest of Adobe Creative Suite be 64-bit native on Mac and Windows?**

Adobe is not yet in a position to announce detailed plans for 64-bit support across all of the Creative Suite products. We can say that for other Creative Suite products we'll be prioritizing 64-bit work based on the potential user benefits and the complexity of the code transition.

#### **For more information**

For more details about Adobe Creative Suite 4 Production Premium, visit: [www.adobe.com/go/creativesuiteproduction](http://www.adobe.com/go/creativesuiteproduction).



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