

Using Adobe® Premiere® Pro CS5 with Canon Digital Video Cameras



What's included:

- Adobe Premiere Pro CS5
- Adobe OnLocation CS5
- Adobe Encore CS5
- Adobe Bridge CS5
- Adobe Media Encoder CS5

Adobe Premiere Pro CS5 is also available as a component of

- Adobe Creative Suite® 5 Production Premium
- Adobe Creative Suite 5 Master Collection

Adobe Premiere Pro CS5 software provides a powerful, flexible toolset for editing video shot with Canon digital video cameras. Broad native support for high-definition video formats maintains the pristine quality of your footage, while the native 64-bit, GPU-accelerated Mercury Playback Engine lets you edit demanding HD projects in real time. In addition, Adobe Premiere Pro CS5 lets you mix and match formats freely and add high-quality editorial effects directly in the timeline with hundreds of nonlinear editing features optimized for creative productivity.

The other software components included with Adobe Premiere Pro CS5 give you even more creative control and flexibility. Use Adobe OnLocation™ CS5 to capture and log footage from Canon digital video cameras. With Adobe Encore® CS5 software, use a robust feature set that supports the latest authoring technologies to deliver your work on DVD and Blu-ray Disc, as well as searchable web DVD. And Adobe Media Encoder makes delivery in virtually all of the major formats for broadcast, film, online, device, and mobile distribution a snap.

Canon offers an extensive range of digital video cameras for demanding professional videographers as well as serious video enthusiasts. Canon video cameras come in different shapes and sizes, capture at various frame rates and resolutions using advanced CCD or CMOS image sensors, and offer features and optional accessories designed to provide the creative control, flexibility, and advanced capabilities your work demands.

Adobe Systems and Canon have collaborated to bring highly efficient, file- and tape-based workflows to Adobe Premiere Pro CS software, giving users the ability to natively edit standard- and high-definition footage shot with Canon video cameras, including the new Canon XF305/300, which records video on solid-state media using the powerful new Canon XF MPEG-2 codec with Full HD 1920x1080 resolution, 50Mbps bit rate, and 4:2:2 color sampling.

This document provides sample workflows and describes the benefits of using Adobe Premiere Pro CS5 with Canon digital video cameras.

Native format support

Adobe Premiere Pro CS5 offers full native format support for the standard- and high-definition video formats used by Canon video cameras—DV, HDV, and AVCHD, as well as the new Canon XF MPEG-2 codec. Adobe Premiere Pro CS5 also offers native support for high-definition video shot with the Canon 5D Mark II, 7D, 1D Mark IV, and EOS Rebel T2i DSLRs (for details see *Working with Canon DSLR footage in Adobe Premiere Pro CS5*).

Native format support eliminates the time-consuming process of transcoding or rewrapping your footage in an intermediate codec, so you can start working with your footage as soon as you've imported it into your project. Because it hasn't been transcoded, your source footage maintains its pristine quality throughout the production workflow. Native support also means that the metadata coming from the camera is retained.

Capture and import footage

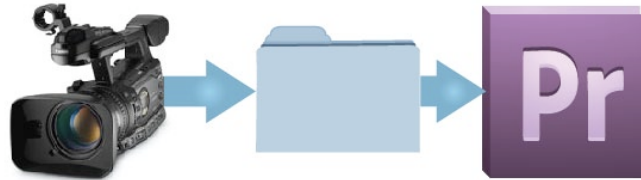
Adobe Premiere Pro CS5 and Adobe OnLocation CS5 software provide highly efficient options for acquiring and importing Canon camcorder footage into your projects. Choose the workflow best suited to your camera, production, and post-production needs.

About the Canon XF MPEG-2 codec

Canon has adapted the highly reliable and versatile MPEG-2 compression format for use in its new XF305/300 camera. The XF305/300 uses Material Exchange Format (MXF) for its file structure. The internationally standardized container format is used to wrap video and audio content along with important metadata into a single media file that is recorded on readily available, cost-effective Compact Flash Cards. The XF305/300 shoots Full HD 1920x1080 resolution at 50Mbps using 4:2:2 color sampling. 4:2:2 provides twice the color resolution of HDV and other codecs that rely on 4:2:0 color sampling and yields smooth tonal and color gradients, making it well-suited for post-production processes such as color grading, keying, and compositing.

Tapeless, file-based acquisition

Canon video cameras record video and audio on various digital storage media, including hard drive, flash memory, and removable SD memory cards. To bring any of these tapeless files into your Adobe Premiere Pro projects, use the Media Browser panel to navigate to and select the files. Because Adobe Premiere Pro supports the video formats used by Canon video cameras natively, the files import in a few seconds, without complex format conversions.



Depending on the camera model, shoot XF MPEG-2, AVCHD, or HDV-format video, store it on tapeless digital media, and quickly import it into Adobe Premiere Pro using the Media Browser, complete with metadata.

Alternately, you can use OnLocation to log tapeless footage on set or in post-production. The workflow for importing tapeless files into your OnLocation projects is the same as it is for Adobe Premiere Pro—use the Media Browser panel in OnLocation to navigate to and select your media, and then quickly import it into your OnLocation project.



Import your tapeless media into Adobe OnLocation, and then log and add metadata to your files. When you bring them into Adobe Premiere Pro, use the metadata to streamline the post-production workflow.

Canon HD Video Cameras	Resolution & Frame Rates*	Import Method	Capture Hardware/ Software	Codec Options/Notes
XF305/300	1920x1080, 60i, 50i, 30p, 25p, 24p	File Transfer	Adobe Premiere Pro Media Browser	50Mbps, 4:2:2, CBR MPEG-2 in an MXF wrapper
	1280x720, 60p, 50p, 30p, 25p, 24p			
	1920x1080, 60i, 50i, 30p, 25p, 24p			35Mbps, 4:2:0, VBR MPEG-2 in an MXF wrapper
	1280x720, 60p, 50p, 30p, 25p, 24p			
	1440x1080, 60i, 50i, 30p, 25p, 24p			25Mbps, 4:2:0, CBR HDV-compatible MPEG-2 in an MXF wrapper
VIXIA HF S21, HF S20, HF S200, HF S11, HF S10, HF S100, HF M31, HF M30, HF M300, HF20, HF200, HF R11, HF R10, HF R100, HG21, HG20	1920x1080, 60i, 24p, 24p Cinema Mode, 30F	File Transfer	Adobe Premiere Pro Media Browser	AVCHD
HV40	1920x1080 24p, 24p Cinema Mode, 30F	File Transfer	Adobe Premiere Pro Media Browser	HDV
	1440x1080 24p, 24p Cinema Mode, 30F			

* Some XF305/300 frame rates may require an additional paid upgrade

About the Canon XF Utility

The Canon XF Utility (included with the Canon XF305/300) runs on Mac and Windows computers, and offers various options for conveniently managing and playing back clips recorded with the video camera, including the ability to:

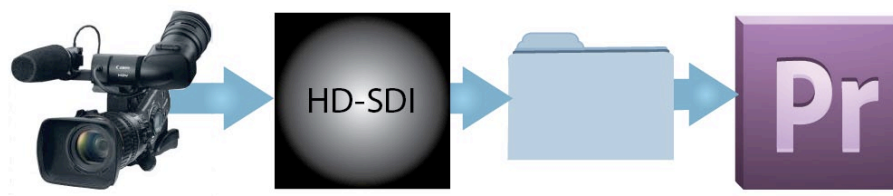
- Display and search a list of all clips recorded on a Compact Flash (CF) card and play back clips
- Transfer clips recorded on a CF card to your computer, or write back previously saved clips from the computer onto a CF card
- Create, edit, and save User Memo profiles on SD memory cards, and later load a User Memo file to your video camera. During recording, the User Memo file information is embedded in the clips
- Export clips as MXF files, and then save them in a folder on your hard drive

Using this workflow enhances your ability to use metadata as a timesaving tool. For example, in preproduction, you plan your shots and create shot placeholders in the OnLocation shot list that include essential details such as camera angle, shot location, take number, and so on. Using timecode as a reference, OnLocation automatically matches the information to the recorded clips when they are imported from the tapeless media.

During post-production, metadata streamlines searching for clips while you edit. With metadata, you can quickly locate media assets and clips by filename, date, time, camera setting (such as resolution or frame rate), shot location, or any information you've added to your asset or clip. And when you run Speech Search in Adobe Premiere Pro, you can transcribe spoken dialogue that is converted into metadata, making locating particular footage simple.

HD-SDI (SMPTE 292) and SD-SDI (SMPTE 259M) capture

When shooting with Canon digital video cameras such as the XF305, XL H1S, and XH G1S that feature HD-SDI output connectors, use third-party capture cards from Adobe partners such as AJA, Blackmagic Design, and Matrox to capture uncompressed 4:2:2 1080i60/50, 30p, 30F, 24p, or 24F footage directly to your hard disk. Once on your hard drive, you can use the Media Browser panels in both Adobe OnLocation CS5 and Adobe Premiere Pro CS5 to quickly locate the footage you need and import it into your project.



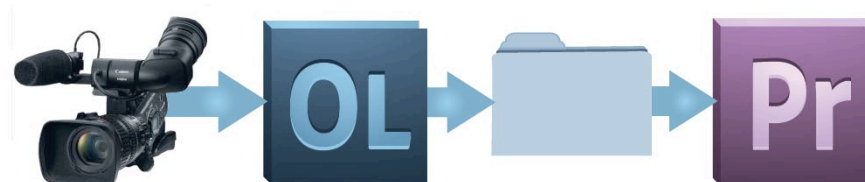
Capture uncompressed HD from the Canon XF305, as well as XH and XL series video cameras directly to hard disk over HD-SDI using a third-party capture card, and then use the Media Browser panel in Adobe Premiere Pro or Adobe OnLocation to quickly import the footage.

Canon HD Video Camera	Resolution & Frame Rates*	Import Method	Capture Hardware/ Software	Codec Options/Notes
XF305	1920x1080, 60i, 50i, 30p, 25p, 24p 1280x720, 60p, 50p, 30p, 25p, 24p	HD-SDI	Third-party capture card required	Uncompressed
XH G1S, XH G1, XL H1S, XL H1	1440x1080, 60i, 50i, 30F, 25F, 24F	HD-SDI	Third-party capture card required	Uncompressed

* Some frame rates may require an additional paid upgrade

Direct-to-disk acquisition with Adobe OnLocation

Many Canon video cameras record HDV-format video on standard miniDV cassettes. Those same video cameras come equipped with FireWire connectors that can be used to link the camera to a computer that's running Adobe OnLocation. Use OnLocation to record SD and HD video directly to hard disk and log metadata while shooting on set or later during post-production. When you transfer content directly to Adobe Premiere Pro for editing, all metadata and clip information, including In and Out points set in OnLocation, are retained by your media assets.



Use IEEE 1394 to connect your Canon HDV video camera to Adobe OnLocation, record SD and HD video directly to hard disk, and then bring the footage into Adobe Premiere Pro using the Media Browser panel.

About AVCHD and XF MPEG-2 spanned clips

With Relay Recording, some Canon video cameras automatically switch recording from their internal memory to SD cards when the internal drive becomes full, so recording continues uninterrupted. This creates spanned clips. Similarly, the new XF305/300 camera features Relay Recording between CF cards.

The Media Browser in Adobe Premiere Pro treats spanned clips from Canon video cameras as a single asset. When dragged from the Media Browser panel into the Project panel, spanned clips are displayed as one file.

Canon HD Video Camera	Resolution & Frame Rates*	Import Method	Capture Hardware/ Software	Codec Options/Notes
XL H1S, XL H1A, XL H1, XH G1S, XH A1S, XH G1, XH A1	1440x1080, 60i, 50i, 30F, 25F, 24F	IEEE 1394 (OnLocation) File Transfer (Adobe Premiere Pro)	Adobe OnLocation Built-in Support Adobe Premiere Pro Media Browser	DV, HDV No 24F export to tape

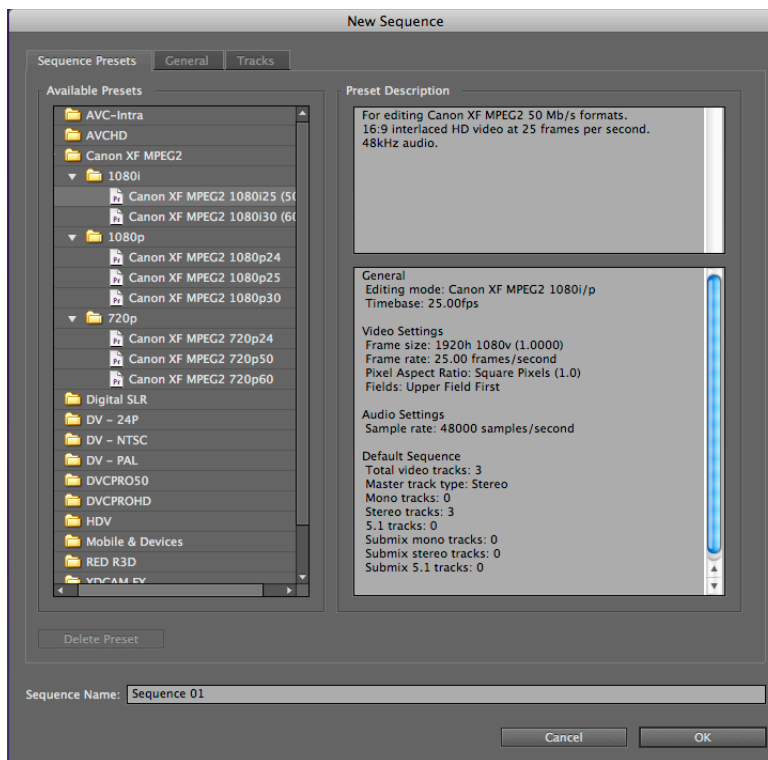
* Some frame rates may require an additional paid upgrade

Tape-based capture

For those who still need to pull DV and HDV content off of tape shot with XL or XH series video cameras or other Canon models that record to miniDV tape, Adobe Premiere Pro supports batch capturing—automatic, unattended capture of multiple clips from controllable cameras and tape decks. You define a batch by selecting a group of clips that you have logged. These appear as offline (placeholder) clips in the Project panel or in a bin. You can capture any number of logged offline clips by selecting them and choosing File > Batch Capture. When you begin capture, Adobe Premiere Pro automatically re-sorts entries by tape name and timecode In points so that they're captured as efficiently as possible. Automatic scene detection for both DV and HDV footage saves more time by reducing the number of clips you have to log manually.

Editing workflow

Adobe Premiere Pro enables an accessible and comprehensive workflow for editing, refining, and delivering content. Start by creating a new project and choosing a preset that best matches your source footage. When you don't see a preset that fits your footage, Adobe Premiere Pro lets you customize an existing preset or start from scratch so your sequence settings match your assets exactly.



To help get your projects started quickly, Adobe Premiere Pro CS5 includes an extensive array of sequence presets—including presets for the new Canon XF MPEG2 codec.

You can also freely mix source footage with different resolutions, frames rates, and aspect ratios in sequences without complex format conversions. For example, you can drop HDV 1440x1080 24F footage shot with a Canon XH A1S into the same timeline as 1920x1080 30p footage from a Canon 5D Mark II DSLR and 1920x1080 60i uncompressed footage from an XL H1S that was captured directly to hard disk over HD-SDI. You can even drop SD 4:3 clips into a 16:9 HD sequence—when you do so, the SD clips are pillar-boxed automatically.

GPU acceleration is supported on the following NVIDIA graphics cards

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

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

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

Real-time editing

Thanks to the Mercury Playback Engine and broad native format support, mixed-format timelines can be edited in real time. The native 64-bit, GPU-accelerated Mercury Playback Engine yields dramatic improvements in performance and stability, so you see the results of complex, computationally intense effects such as color correction, Gaussian blur, and keying in real time, even when you're working with multiple layers of demanding high-definition video.

The Mercury Playback Engine in Adobe Premiere Pro CS5 allows you to adjust the playback and paused resolution of video displayed in the Source Monitor or Program Monitor—helping to achieve smooth performance by matching your computer's capabilities to the type of footage/project being edited. When a supported NVIDIA graphics card is installed on your system, the Mercury Playback Engine works hand in hand with NVIDIA® CUDA™ technology that 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 CPUs to handle background tasks. 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 timesaving, 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.

Throughout this real-time editing workflow, in most cases, rendering occurs only when you send your sequence to Adobe Media Encoder for output in virtually any of the major delivery formats.

Delivery

When your project is complete, Adobe Premiere Pro CS5 gives you the flexibility to deliver your work practically anywhere. When you want to output your work on DVD or Blu-ray Disc, you can use Adobe Dynamic Link to send your Adobe Premiere Pro sequences straight to Adobe Encore without intermediate rendering. Adobe Premiere Pro lets you put markers in your sequence's timeline that act as chapter markers when imported into Encore or interactive cue points when exported to FLV or F4V for viewing in Adobe Flash® Player. You can also turn your DVD and Blu-ray Disc projects into web DVDs. Web DVDs replicate their DVD or Blu-ray Disc counterparts by displaying the same content online in a web browser and include interactive menus and subtitles, as well as pop-up menus and (for those based on Blu-ray Disc projects) high-resolution video.

To deliver your projects online, on air, on device, and on film, Adobe Media Encoder, a separate software application included with Adobe Premiere Pro CS5, saves you time by automating the process of creating multiple encoded versions of your source files and Adobe Premiere Pro sequences. You can set up multiple items for 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 and F4V, Windows Media, MPEG-2, H.264, QuickTime, AVC-Intra, DPX, and more.

Summary

Broad native format support lets you bring footage from Canon digital video cameras into Adobe Premiere Pro quickly and efficiently, while preserving image quality. Native 64-bit, GPU-accelerated performance lets you edit complex timelines in real time, and a comprehensive set of professional editing tools give you the power and flexibility to you achieve the look and pacing you're after. And with Adobe Encore and Adobe Media Encoder you can deliver your work practically anywhere.

For more information

Adobe Premiere Pro CS5 details: www.adobe.com/premiere

Adobe Premiere Pro CS5 system requirements: www.adobe.com/products/premiere/systemreqs



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