



NVIDIA PureVideo Bringing the Home-Theater Experience to Your PC

Today, consumers are demanding smooth, high-quality DVD playback and stutter-free, high-definition (HD) viewing for a home theater experience driven by their PC. The best way to achieve this is with NVIDIA® PureVideo™ technology.

Watch videos on your desktop PC, notebook PC, or HDTV without the annoying artifacts and imperfections of traditional PC-based video solutions. NVIDIA PureVideo technology is a combination of hardware video processors and video decode software that delivers smooth HD video in all formats with superb picture clarity. And the high-precision subpixel processing enables videos to be scaled to any size so that even small videos look like they were recorded in high-resolution.



And, since PureVideo is programmable and upgradeable, you can rest assured that a PC powered by PureVideo will keep up with the pace of tomorrow's video technologies, and continue to deliver HD content well into the future.



SUPERB PICTURE CLARITY

Using revolutionary techniques, NVIDIA PureVideo technology addresses typical video playback image problems and delivers superb picture clarity, free of imperfections.

Smooth

Video content from satellite, cable, and DVDs is interlaced data, meaning two pictures are “weaved”—or interlaced—together to provide full picture detail. In many TVs and most PCs interlacing causes jagged edges in the picture, giving viewers a less detailed image. The powerful PureVideo technology uses advanced algorithms to maintain a smooth, fully detailed image.

Some PCs try to remove feathering from an image by combining the fields using simple de-interlacing techniques that result in a double image effect. PureVideo uses advanced spatial-temporal de-interlacing to deliver a crisp image without the double images typical of simpler, traditional de-interlacing techniques.

Clear

Most movies start out as film shot at 24 frames per second. They are then converted to 25 or 30 frames per second for viewing on monitors or TVs. This conversion process is called 2:2 or 3:2 pull-down, which eliminates the flickering that would be caused by the missing frames. However, sometimes the odd and even fields of the added frames are not properly matched, resulting in blurry images. NVIDIA PureVideo technology recovers the original 24 frame content to show a crisp clear picture, frame after frame.

Crisp

When videos are edited after they have been converted from 24 to 25 to 30 frames, the edits can disrupt the normal 2:2 or 3:2 pulldown cadence. PureVideo uses advanced processing techniques to detect poor edits, recover the original content, and display perfect picture detail for smooth, natural looking video.

* Featured in NVIDIA® GeForce™ 6 and 7 Series GPUs and select NVIDIA Quadro® graphics boards.

HIGH-DEFINITION VIDEO

NVIDIA PureVideo technology finally allows you to experience lifelike HD video on your PC, notebook, or HDTV without the expense of additional home-theater devices. With dedicated hardware to accelerate MPEG-2/DVD playback as well as the new Microsoft® Windows Media® HD Video (WMV HD) standard, your DVDs come to life in detail never before possible on a PC. PureVideo technology, featured in NVIDIA graphics processing units (GPUs)*, offloads video decoding from the CPU, resulting in smooth, stutter-free, high-definition video playback.

NVIDIA PureVideo technology lets you experience astonishing, lifelike HD video playback on your PC with dedicated hardware acceleration for all current and future HD standards.





NVIDIA PureVideo technology brings high-definition video to life and makes non-HD video crisp, clear, smooth and incredibly vibrant on any PC.

THE NVIDIA PUREVIDEO EXPERIENCE

Precise, Vivid Colors on Any Display

PCs provide output to many different display types: CRTs, LCDs, projectors, conventional and plasma TVs. Each display has different light emitting characteristics and native resolutions. Therefore, a variety of color correction techniques are utilized to optimize the content for each type of display. PureVideo's color correction controls can optimize video quality for any display. In addition to color correction, PureVideo can also match any resolution video to any resolution display, precisely, without overscan or loss of perimeter objects.

FEATURES

BENEFITS

High-Definition MPEG-2 and WMV Hardware Acceleration	Smoothly playback all MPEG-2 and WMV video—including HD content—with minimal CPU usage so the PC is free to do other work.
Advanced Spatial-Temporal De-Interlacing	Smooths video and DVD playback on progressive displays to deliver a crisp, clear picture that rivals high-end home theater systems.
3:2 and 2:2 Pull-Down Correction	Recovers the original film format data from interlaced video images to provide more accurate video playback and superior picture quality.
Video Scaling and Filtering	High-quality scaling and filtering technology delivers a clear, clean image at any window size, including full-screen HDTV resolutions up to 1080i.
Video Color Correction	NVIDIA PureVideo technology includes video color correction which ensures that the colors you see are vivid and lifelike. With color correction, images appear natural, rather than washed out and pale.



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