



Intel® Clear Video Technology

Enhanced high-definition video playback, sharper images and precise color control from your PC

Intel® Clear Video Technology is a combination of video processing hardware and software technologies that delivers enhanced high-definition video playback, sharper images, precise color control and advanced support for a wide range of digital displays. This technology is available on all Intel® G965 Express Chipset-based platforms and is designed specifically to meet the changing needs of the digital home user.

Today's digital home consumers are demanding high-quality video playback and sharp image quality from their PC. Intel Clear Video Technology is designed to address these needs with advanced processing capabilities to enable a richer entertainment experience. In addition to stutter-free playback and vibrant color controls, this technology delivers crystal clear images without the imperfections and artifacts usually associated with PC-based video content.

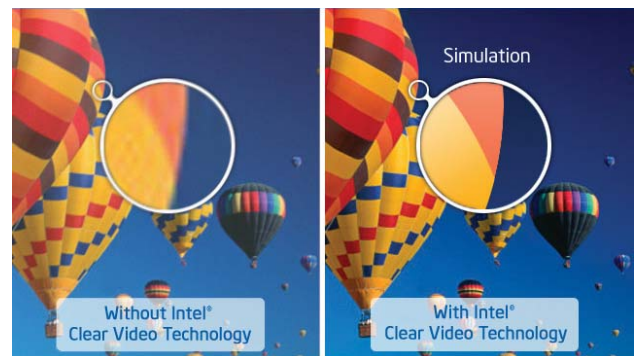
Enhanced High-Definition Video Playback

Intel Clear Video Technology allows users to experience high-definition video playback on the PC without the need for expensive add-in video cards or decoders. Intel Clear Video Technology uses advanced techniques to provide smoother video playback by accelerating decode through dedicated hardware in the chipset, enabling support for high-bit rate high-definition content. These advancements also enable multi-stream playback (up to 1 HD and 1 SD stream) for picture-in-picture.

Sharper Image Quality

By using more advanced de-interlacing techniques, Intel Clear Video Technology delivers clearer, more detailed images by eliminating many of the jagged edges and video artifacts found when viewing interlaced content. Through this technology, digital home users can maintain sharp image quality even at high-resolutions, and reduce annoying artifacts through both analog and digital video signals.

Video captured through personal video recorders (PVRs) or from digital camcorders can also benefit from the motion detection and image enhancement of Intel Clear Video Technology.



Intel® Clear Video Technology uses advanced de-interlacing technology and ProcAmp color controls to deliver sharper, more vibrant video images. (Images are simulated based on pre-silicon projections).

Precise Color Control

The powerful color control functionality of Intel Clear Video Technology ensures videos are not too dark, overly bright, or washed out. By using the ProcAmp color control settings, Intel Clear Video Technology allows user adjustment of hue, saturation, brightness and contrast. This built-in control enables more accurate color of video clips under any environmental lighting condition, regardless of the source lighting conditions, video format, or display type.

Advanced Digital Display Support

Intel Clear Video Technology allows the PC to connect to a wide range of digital displays by supporting the latest digital display interfaces, including the High-Definition Multimedia Interface (HDMI). HDMI carries uncompressed HD video and uncompressed multi-channel audio in a single cable, supporting all HD formats including 720p, 1080i and 1080p. For PCs using digital TV tuners, Intel Clear Video Technology adds support for Media Expansion or ADD2 cards which enable digital display connections such as DVI and TV-out in a single-card solution.

A Smarter, Integrated Solution

Intel Clear Video Technology is integrated right into the Intel G965 Express Chipset, which enables a more cost-effective video solution that can be both quieter and cooler compared to PCs with add-in video processing cards. Intel G965 Express Chipset does not require an active fan for cooling because it consumes less power compared to discrete video solutions. The Intel G965 Express Chipset with Clear Video Technology includes support for the latest PC operating systems, including Microsoft Windows* Vista (Premium), which includes integration of the Media Center Edition (MCE) features and video controls.



Another advantage of an integrated video solution is enhanced system performance. Video and graphics require dedicated memory and processing, and PC applications have divergent memory needs. Some applications, such as e-mail and Internet browsing, require very little video memory.

Others, such as video decoding, require more. Intel Clear Video Technology supports both of these demand levels through a unique intelligent memory management scheme called Dynamic Video Memory Technology (DVMT). DVMT handles these diverse applications by providing the maximum availability of system memory for general computer usage, while supplying additional video and graphics memory when a memory-intensive application requests it, which optimizes system performance under any situation.

Redefining the Visual Experience

The Intel G965 Express Chipset with Clear Video Technology provides smooth, clear video quality and key digital display interface support without the extra expense of a discrete video card.



Intel® Clear Video Technology enables multi-stream playback for picture-in-picture. (Images simulated).

Intel® Clear Video Technology Specifications

MPEG-2 decode	iDCT + motion compensation. Up to 2 stream support (1 HD and 1 SD)
De-interlacing	Advanced pixel adaptive (SD/HD-1080i)
Color control	ProcAmp: brightness, hue, saturation, contrast
Display support (through SDVO)	HDMI, DVI, component, composite, S-Video, HDTV (1080i/p, 720p), TV-out, dual independent display
Native display support	VGA
Video scaling	4x4 scaling
Dynamic display modes	Flat-panel, wide-screen, digital TV
Aspect ratio	16:9, 4:3, letterbox
Maximum resolution support	2048 x 1536 at 75 Hz, RGB (QXGA)
Operating systems support	Microsoft Windows Vista*, Microsoft Windows XP*, Windows XP 64-bit, Media Center Edition*, Windows 2000, Linux-compatible (Xfree86 source available)

For more information, visit the Intel Web site: www.intel.com/go/clearvideo

Images in this document are simulated based on Intel silicon projections. Actual video performance and quality will vary based on system specifications.

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