



# Intel® GMA 950 Graphics

## Visual excitement from your PC!

Intel graphics technology is the #1 choice of personal computer buyers around the world<sup>1</sup>. The new Intel® Graphics Media Accelerator 950 (Intel® GMA 950) graphics core creates visual excitement with smooth, high-quality video playback, advanced 3D capabilities and support for all your display needs. Intel has engineered this powerful, feature-rich graphics solution right into the heart of your system—the Intel® 945G Express Chipset—so you get incredible graphics capabilities at lower costs.

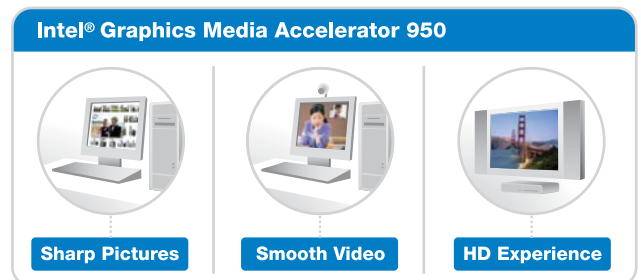


### Make Your Display Sparkle

Intel GMA 950 graphics deliver new levels of performance, so you can use your PC for new levels of family fun. This solution features support for the latest High Definition TVs and wide-screen displays, as well as hardware acceleration for Microsoft DirectX® 9. Chat with friends and family, learn more through rich digital libraries, play games with people around the world—and enjoy your computer to the fullest.

### Playing With Media

With today's PCs, you can store, deliver and display video, music and photos more easily than ever. Intel GMA 950 graphics provide outstanding visual quality and vibrant color. New features, such as support for High-Definition TV (HDTV) and dynamic modes, allow your PC to connect to a wide variety of displays for a whole new media playback experience. Whether you develop the content on your own or tap into the rich content available on the internet, your PC will become a window into a rich world of media capabilities.



Intel® GMA 950 graphics bring your digital media to life with sharp, vibrant pictures, smooth playback of video and output to a wide range of displays, including High Definition TV (HDTV) and digital flat panels.

### Intel Graphics Can Mean Less Noise, Heat and Cost

Intel graphics technology is integrated right into the chipset, which enables a more cost-effective graphics solution that can be both quieter and cooler compared to PCs with discrete graphic adapter cards. Intel GMA graphics do not require an active fan for cooling because they consume less power compared to discrete graphics solutions.



## Optimal Use of System Resources

Graphics require dedicated memory and processing, and applications have divergent memory needs. Some applications, such as e-mail and Internet browsing, require

very little graphics memory. Others, such as games, require more. Intel GMA 950 graphics support 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 graphics memory when a 3D-intensive application requests it.

The Intel GMA 950 graphics architecture also takes advantage of the high-performance Intel processor installed in your system. Many computer graphics operations can be handled by the system processor, providing an optimal blend of performance and cost.

## Advanced Display Technology

Intel GMA 950 graphics support Dual Independent Display technology. When an optional adapter card is installed, this capability allows two separate displays to be connected to the system at the same time. One way to use this capability is to create a larger desktop work surface spanning multiple displays. Intel GMA 950 graphics also supports Media Expansion Cards, which enable dual TV tuning and digital display connectors such as DVI and TV-Out in a single card solution.

## Great Graphics for Everyone

Intel GMA 950 provides the clarity, smooth video quality and key 3D performance for home and business users, without the extra expense of a discrete graphics card. For more information on Intel graphics solutions, visit:

[intel.com/graphics](http://intel.com/graphics)

## Technical Specifications



### Intel GMA 950 Graphics Core

- 400MHz 256-bit graphics core
- Up to 10.6 GB/sec memory bandwidth with DDR2 667 MHz system memory
- 1.6 GPixels/sec and 1.6 GTexels/sec fill rate
- 192 MB maximum video memory
- 2048x1536 at 75 Hz maximum resolution
- Dynamic Display Modes for flat-panel, wide-screen and Digital TV support
- Operating systems supported: Microsoft Windows\* XP, Windows\* XP 64-bit, Media Center Edition, Windows 2000; Linux-compatible (Xfree86 source available)

### High Performance 3D

- Up to 4 pixels per clock rendering
- Microsoft\* DirectX\* 9 Hardware Acceleration Features: Pixel Shader 2, Volumetric Textures, Shadow Maps, Slope Scale Depth Bias, Two-Sided Stencil
- Microsoft\* DirectX\* 9 Vertex Shader 3.0 and Transform and Lighting supported in SW through highly optimized Processor Specific Geometry Pipeline (PSGP)
- Texture Decompression for DirectX\* and OpenGL\*
- OpenGL\* 1.4 support with ARB extensions

### Advanced Display Technology

- Consumer Electronic display (Digital TV) support
- Two Serial Digital Video Out (SDVO) ports for flat-panel monitors and/or TV-out support via ADD2 cards
- Support for Intel Media Expansion Cards, providing TV out and PVR capability
- Multiple display types (LVDS, DVI-I, DVI-D, HDTV, TV-out, CRT)
- Dual screen support via ADD2 digital video devices
- HDTV 720p and 1080i display resolution support
- Interlaced Display output support

### High Quality Media Support

- High Definition Hardware Motion Compensation to support HD hi-bitrate MPEG2 media playback
- Up and Down Scaling of Video Content
- HD Content Decode – up to two stream support
- 5x3 Overlay Filtering



<sup>1</sup> Source: Mercury Research Q32003 PC Graphics Report

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