



Intel[®] 865G/GV Chipset with Microsoft Windows* XP Media Center Edition 2004

White Paper

October 2003



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¹Hyper-Threading (HT) Technology requires a computer system with an Intel® Pentium® 4 processor supporting HT Technology and a HT Technology enabled chipset, BIOS and operating system. Performance will vary depending on the specific hardware and software you use. See www.intel.com/info/hyperthreading for more information including details on which processors support HT Technology.

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Revision History

Revision Number	Description	Revision Date
-001	Initial Release.	October 2003

1 Introduction

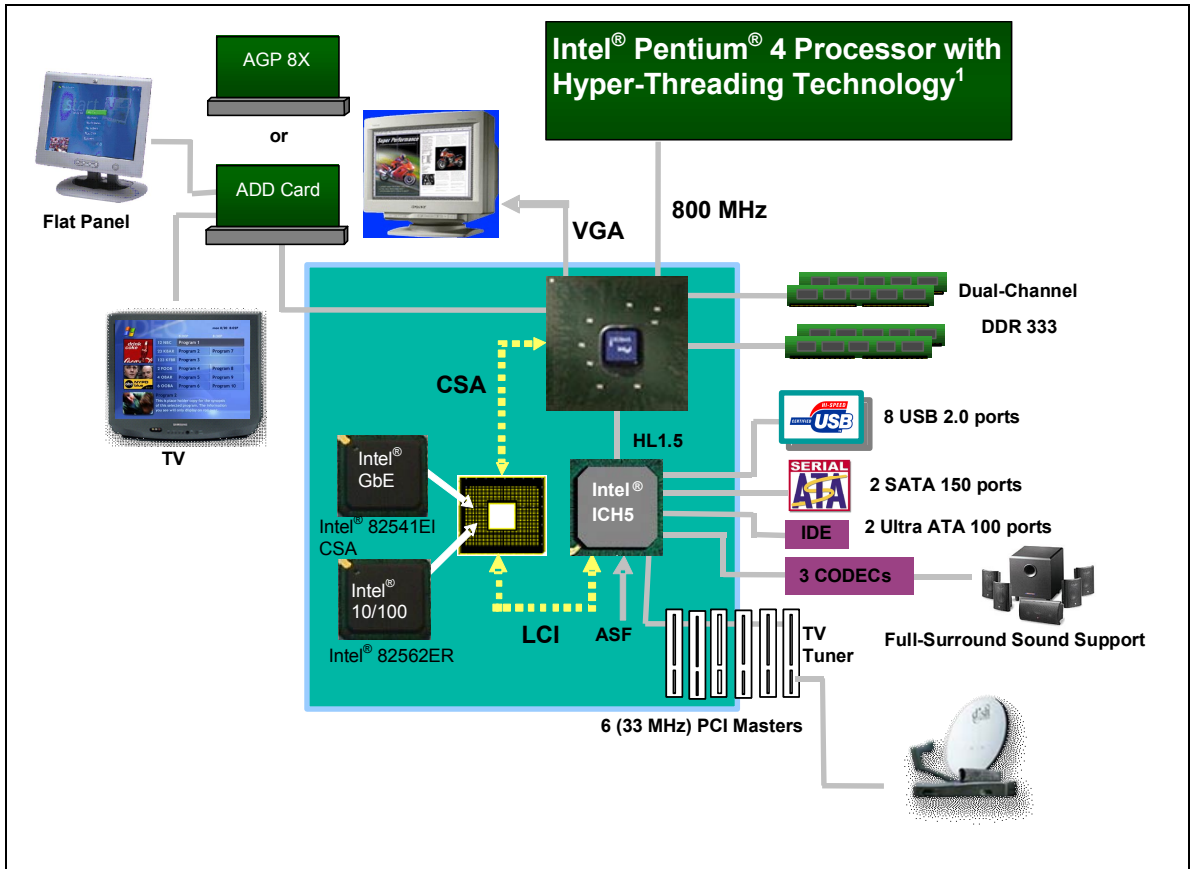
Intel has optimized the hardware and software of the Intel® 865G/GV chipset and Intel® Extreme Graphics 2 driver software for Microsoft Windows* XP Media Center Edition 2004. The result is a platform that delivers solid performance for mainstream PCs. This document describes the system architecture and hardware/software requirements when using the 865G/GV chipset and Intel Extreme Graphics 2 with Microsoft Windows XP Media Center Edition 2004. For further information on the 865G/GV chipset features and benefits, please refer to <http://developer.intel.com/design/chipsets/865G/> and <http://developer.intel.com/design/chipsets/865GV/>

Microsoft's Windows XP Media Center Edition enables consumers to perform many different tasks, such as downloading movies on demand or online music, while watching a pre-recorded TV program. Or, they could be playing a mainstream 3D game, and recording a new TV program, at the same time. The Intel® Pentium® 4 Processor with Hyper-Threading Technology¹ and Intel Extreme Graphics 2 Driver software have been designed to take advantage of multi-tasking environments delivering the system responsiveness needed when running multiple applications concurrently.

1.1 Platform Overview

The 865G/GV chipset and the Intel Extreme Graphics 2 driver deliver a smooth multi-media performance at a lower cost than today's external graphics solutions. Coupled with the Intel Pentium 4 Processor with Hyper-Threading Technology and dual channel memory, it enables a cost-effective Windows XP Media Center Edition 2004-enabled platform for mainstream consumer systems. The system configuration shown in the block diagram below has been fully validated by Intel to ensure it meets all performance expectations at the most commonly used resolutions.

Figure 1. Block Diagram



2 Hardware Requirements

Mainstream Systems	Intel Advantage
Intel® Pentium® 4 Processor with HT Technology ¹	Excellent system performance for Media Center multi-tasking usage models
800 MHz System Bus with Dual-Channel DDR333 (512 MB)	Maximum headroom and bandwidth at mainstream system price points providing the end user with high quality display resolutions
Intel® 865G/GV Chipset with Intel® Extreme Graphics 2	Graphics optimized for Media Center and mainstream 3D applications
TV Tuner	Support industry leading solutions to ensure smooth TV signal capture and playback
Display	Extensively validated with a wide variety of displays, including flat panel, TV, and VGA to deliver visual quality
AGP 8X ⁽¹⁾	Flexibility for upgrades

NOTES:

1. 865G chipset only.

2.1 Processor

The Intel Pentium 4 Processor with HT Technology is highly suited for the multi-tasking features of Microsoft Windows XP Media Center Edition 2004. Both the Intel Extreme Graphics 2 and Media Center software have been updated to take advantage of Intel’s Hyper-Threading Technology for great visual quality and performance. The processor delivers high system performance with efficient multi-tasking, like converting music to MP3s while recording a TV program, with additional performance headroom for more demanding applications. More detailed information on the advantages of Hyper-Threading Technology and 800 MHz front side bus in multi-tasking environments is located at <http://developer.intel.com/products/ht/hyperthreading.htm>

2.2 Memory

The 865G/GV chipset has been designed to take full advantage of dual-channel DDR, providing an efficient platform that is optimized for the Media Center multi-tasking environment. The configuration recommended is dual-channel DDR333, which brings the performance needed for memory demanding applications such as Media Center to the mainstream consumer market supporting high quality video display resolutions.

2.3 TV Tuner

Reliable, flawless, video capture and playback are critical components of the Media Center experience. The most common TV tuners available on the market today have been extensively



validated as part of the recommended Media Center system configuration. For a complete list of TV tuners, contact your local Intel representative.

2.4 Display

All displays that are supported on the 865G/GV chipset-based platform will also function with Microsoft Windows XP Media Center Edition 2004. The 865G/GV chipset-based platform with Media Center supports most common resolutions up to 1280x1024@32bpp. All VGA displays are supported with no additional hardware required. Any digital display listed below is also supported via a third-party solution, such as an ADD card or a motherboard down solution. For a complete list of ADD card vendors, contact your local Intel representative.

Display	Hardware
VGA	None required
Digital Flat Panel	ADD Card
TV	ADD Card with S Video and/or Composite
Local Flat Panel	Third-party silicon and motherboard down solutions

3 Software Requirements

Mainstream Systems	Intel Advantage
Video Codecs	Top industry leaders extensively validated to ensure compatibility
Audio	Full surround sound support with Dolby* Digital 5.1
PV13.3.2 or later Graphics Driver	Optimized for best Media Center performance

3.1 Video Codecs

Many industry leading software video codecs have been extensively validated as part of the recommended Media Center system configuration. MPEG 1, 2, and 4 encoded video were tested to ensure a smooth playback and positive end user experience. For a complete list of video vendors, contact your local Intel representative.

3.2 Audio

The 865G/GV chipset supports the Audio Codec '97, which is used in the majority of desktop solutions today. Six-channel, full surround sound, using Dolby* Digital 5.1 provides high-quality audio for use with Media Center.

3.3 Intel® Extreme Graphics 2 Driver

The Extreme Graphics 2 driver has been fully optimized for more efficient switching between the 2D and 3D sections of the driver, delivering a significant performance boost when running Media Center. In addition to updating the graphics driver, Intel joined with the Microsoft User Interface team to optimize Media Center for more efficient operations, while maintaining good visual quality. As a result, the Intel Extreme Graphics 2 driver and Media Center are well designed to complement each other and provide users with a rich multi-media experience.