

# Intel® HD Graphics Driver Release Notes

Driver versions: 15.22.1.2361 and 15.22.1.64.2361

Date: 04/29/2011

A driver is software written for a specific operating system. It is used by the operating system to communicate with a specific hardware device. Intel makes generic versions of the Intel graphics drivers available, but recommends using drivers that may be provided by your computer manufacturer for your particular computer model.

To check whether your computer is using the latest driver, use the Intel® Driver [Update Utility](#). If you have a customized driver installed in your system, please contact your [computer manufacturer](#) for the latest driver.

## Summary

This is a driver update for the 2<sup>nd</sup> Generation Intel® Core™ and Intel® Core processor families. The 2<sup>nd</sup> Generation Intel® Core™ family driver release includes support for Intel® WiDi 2.1 and games playability improvements.

## System Requirements

**Software:** All versions of Windows 7\* and Windows Vista\* operating systems

**Hardware:** All versions of systems supporting Intel® HD Graphics

- For additional help see: [Identifying your Intel® graphics controller](#)

## Contents of the Package:

1. Intel® HD Graphics Driver
2. Intel® Display Audio Driver
3. Intel® Turbo Boost Technology Driver

## New Features (only in Intel® HD 2000/3000)

1. Intel® Wireless Display 2.1 with Blu-Ray\* playback enabled
  - a. Enjoy all of your personal and online content on a big screen with a simple wireless connection. With a laptop featuring Intel® Wireless Display and powered by a visibly smart 2nd generation Intel® Core™ processor, you can sit back and experience your favorite movies, videos, photos, online shows and more on your TV with great image clarity and sound. [www.intel.com/go/wirelessdisplay](http://www.intel.com/go/wirelessdisplay)
  - b. Intel Wireless Display features include: 1080p, HDCP 2.0 output protection, and <250ms Display latency for improved user interactivity.

- c. Intel® WiDi now supports playback of protected content using Blu-ray\* Players and Intel Insider.  
<http://www.intel.com/consumer/products/technology/wirelessdisplay.htm>
2. Intel™ InTru3D Stereoscopic 3D video playback over HDMI1.4 enabled. (Requires stereo 3D capable hardware and video playback software.)
3. OpenGL 3.1 now supported.
4. Hardware Transform and Lighting support in OpenGL added. Increases performance in certain OpenGL applications.
5. MPEG 2 hardware encoding for interlaced content enabled.

## Recommended Applications

Intel tests many games and applications for compatibility and performance. The list of games known to work well is available on the [Graphics page](#). The list of applications enabled for Intel® Quick Sync Video is available on the [Quick Sync page](#).

These lists are non-exhaustive and may grow over time as new games and applications come to market and are tested.

## Performance Improvements

This driver release increases 3D gaming performance on a variety of titles. Intel has tested a number of games on the 2<sup>nd</sup> Generation Intel Core processor with Intel® HD Graphics 3000. The results are listed below.

Game Title*	Percent Improvement <sup>1,2,3</sup>
Batman: Arkham Asylum* v1.1 - Built in Test	18%
BattleForge*	14%
Call of Duty*: Black Ops	37%
Call of Duty*: Modern Warfare 2	11%
Crysis Warhead* v1.00 - benchmark_cargo test	39%
Enemy Territories Quake Wars* 1.5	19%
Far Cry* 2 v 1.03	43%
H.A.W.X.* 2	38%
H.A.W.X.* v1.02 - Built-in Test	28%

Resident Evil* 5 Benchmark - Variable	29%
Starcraft* 2: Wings of Liberty - Devil's Playground	17%
Starcraft* 2: Wings of Liberty - Outlaws	18%

## Notes

1. System Configuration: Intel Core i7-2600K processor with HD Graphics 3000, Intel DH67BL motherboard (BIOS:40497, Intel ID1C4A), 2 X 2 GB DDR3 1333 memory, 1 TB Seagate Barracuda hard drive ST31000528AS, Microsoft Windows 7\* with DX10
2. Test results based on a comparison between the latest Intel® HD Graphics 3000 driver version 15.22.1.64.2361 and the previous version 15.21.5.64.2266.
3. Game configurations set to "low". Performance results may vary depending on individual settings within a game. Not all games have the same configuration options.

\* Other names and brands may be claimed as the property of others

Performance tests and ratings are measured using specific computer systems and/or components and reflect the approximate performance of Intel® products as measured by those tests. Any difference in system hardware or software design or configuration may affect actual performance. Buyers should consult other sources of information to evaluate the performance of systems or components they are considering purchasing. For more information on performance tests and on the performance of Intel products, visit Intel Performance Benchmark Limitations.

Software and workloads used in performance tests may have been optimized for performance only on Intel® microprocessors. Performance tests, such as SYSmark\* and MobileMark\*, are measured using specific computer systems, components, software, operations, and functions. Any change to any of those factors may cause the results to vary. You should consult other information and performance tests to assist you in fully evaluating your contemplated purchases, including the performance of that product when combined with other products.

Relative performance for each benchmark is calculated by taking the actual benchmark result for the first platform tested and assigning it a value of 1.0 as a baseline. Relative performance for the remaining platforms tested was calculated by dividing the actual benchmark result for the baseline platform into each of the specific benchmark results of each of the other platforms and assigning them a relative performance number that correlates with the performance improvements reported.

## Fixed Issues

Fixed issues	Operating System	Graphics
Left 4 Dead 2*: Game now plays with correct brightness. Also fixes issue on multiple Source Engine titles (Alien Swarm*, Counter-Strike*, Half-Life 2*, Portal*)	Windows 7*	Intel® HD Graphics 2000 & Intel® HD Graphics 3000
Mafia II*: Game demo no longer crashing	Windows 7*	Intel® HD Graphics, Intel® HD Graphics 2000 & Intel® HD Graphics 3000
Dead Space*: Artifacts appearing on certain scenes eliminated	Windows 7*	Intel® HD Graphics 2000 & Intel® HD Graphics 3000
Prince of Persia*: Eliminated artifacts exhibited when 4x anti-aliasing enabled	Windows 7*	Intel® HD Graphics 2000 & Intel® HD Graphics 3000
Unigine: Heaven Benchmark 2.1* application now runs in OpenGL mode	Windows 7*	Intel® HD Graphics 2000 & Intel® HD Graphics 3000

Dirt 2*: Corrected textures and eliminated reflection artifacts seen during game play with DirectX* 9 MSAA enabled	Windows 7*	Intel® HD Graphics 2000 & Intel® HD Graphics 3000
Fallout: New Vegas*: Fixed minor artifacts and pixel flickering	Windows 7*	Intel® HD Graphics 2000 & Intel® HD Graphics 3000
Company of Heroes: Opposing Fronts*: Fixed minor terrain artifacts	Windows 7*	Intel® HD Graphics 2000 & Intel® HD Graphics 3000
Split Second*: Fixed artifacts and incorrect textures	Windows 7*	Intel® HD Graphics 2000 & Intel® HD Graphics 3000
Fixed power management issues in 16-bit color depth mode.	Windows Vista*, Windows 7*	Intel® HD Graphics (mobile)
Fixed movie area shake when the overscan set	Windows 7*	Intel® HD Graphics (mobile)
Resolution now correctly reported as 1920x1080 when connected to a HDMI TV	Windows 7*	Intel® HD Graphics (mobile)
System now maintains correct display scaling after reboot.	Windows 7*	Intel® HD Graphics (mobile)
GOM Player*: Video runs correctly in full screen mode.	Windows 7*	Intel® HD Graphics (mobile)
MPEG2: Fixed the occasional system hang while playing MPEG2 video.	Windows 7*	Intel® HD Graphics 2000 & Intel® HD Graphics 3000
Corel VideoStudio Pro X4*: Fixed occasional application crashes	Windows 7*, Windows 7* 64-bit	Intel® HD Graphics 2000 & Intel® HD Graphics 3000
Display: Occasional notebook display flickering when running in battery mode corrected	Windows 7*, Windows 7* 64-bit	Intel® HD Graphics (mobile)
Display: Display now enumerates after resuming from Hibernate state (S4)	Windows 7*	Intel® HD Graphics (mobile)

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