



Motherboard Logo Program (MLP)

# Intel® Desktop Board D945GCLF2

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## MLP Report

9/21/2009

**Purpose:**

This report describes the D945GCLF2 Motherboard Logo Program testing run conducted by Intel Corporation.

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# Introduction

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## Terms and Definitions

Term	Definitions
WHQL	Windows* Hardware Qualification Lab
WLK	Windows Logo Kits
MLP	Motherboard Logo Program. For further information see: <a href="http://www.microsoft.com/whdc/hwtest/default.mspx">http://www.microsoft.com/whdc/hwtest/default.mspx</a>
AP Machine	Audio Precision Machine
Winqual	Windows Qualification
MSFT Tested Product List	Tested Products List. You can view the Windows Marketplace for tested products list at: <a href="http://winqual.microsoft.com/HCL/ProductList.aspx?m=v&amp;cid=105&amp;q=s">http://winqual.microsoft.com/HCL/ProductList.aspx?m=v&amp;cid=105&amp;q=s</a>

# Desktop Board Configuration

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## Desktop Board D945GCLF2 Final Configuration Report: Completion of MLP

Data in this section reflects system configuration at time of MLP submission.

### Board Information

Product Code <sup>1</sup>	BIOS String/Model	Technologies NOT Logo'd (yet)
D945GCLF2	LF94510J.86A.0182.2009.0528.2014	N/A - all technologies logo'd
<b>Processor</b>		
Speed	1.60GHz	
Family	Intel(R) Atom	
Bus Speed	533 MHz	
<b>Motherboard</b>		
Board AA #	E46416	
Board FAB #	105	
* This report applies to the production FAB revision; Please consult your Intel Corporation representative to clarify the motherboard revision you intend to perform logo testing if not the same.		
<b>System Memory</b>		
Speed	Single Channel, DDR2, 533MHz	
Memory Type	DIMM	
Connector Type	DDR2, 240 Pin	
<b>Power Management</b>		
BIOS Default	S3	
<b>Operating System Tested</b>		
	<b>Check Tested</b>	<b>Comments</b>
Windows 7 and 64-bit	<input checked="" type="checkbox"/>	Windows 7
Windows Vista and 64-bit	<input type="checkbox"/>	Vista Ultimate with Service Pack 1
Windows Vista Basic and 64-bit	<input checked="" type="checkbox"/>	Vista Basic with Service Pack 1

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<sup>1</sup> These are the product names to enter in the "Submission ID of previously logo'd qualified PC system or server" field during your "System Using a Previously Logo'd Motherboard" submission to Microsoft.

## Onboard Integrated Devices and Driver for Vista 32-bit and 64-bit

Technology	OS	Version	Package version
Chipset Update Utility Intel® Chipset Software Utility	Windows Vista	9.0.0.1011	9.0.0.1011
	Windows Vista 64-bit	9.0.0.1011	9.0.0.1011
Graphics Intel® Graphics Media Accelerator	Windows Vista	7.14.10.1504	15.8.3.1504
	Windows Vista 64-bit	7.14.10.1504	15.8.3.64.1504
Audio Realtek	Windows Vista	6.0.1.5672	5672
	Windows Vista 64-bit	6.0.1.5672	5672
LAN Realtek	Windows Vista	6.206.502.2008	6.206
	Windows Vista 64-bit	6.206.502.2008	6.206

## Onboard Integrated Devices and Driver for Windows 7 32-bit and 64-bit

Technology	OS	Version	Package version
Chipset Update Utility Intel® Chipset Software Utility	Windows 7	6.1.7100.0	Inbox Driver
	Windows 7 64-bit	6.1.7100.0	Inbox Driver
Graphics Intel® Graphics Media Accelerator	Windows 7	8.15.10.1662	Inbox Driver
	Windows 7 64-bit	8.15.10.1662	Inbox Driver
Audio Realtek	Windows 7	6.0.1.5859	5859
	Windows 7 64-bit	6.0.1.5859	5859
LAN Realtek	Windows 7	7.3.522.2009	7.003
	Windows 7 64-bit	7.3.522.2009	7.003

## Windows Logo Kits Used (WLK)

Microsoft website: <http://www.microsoft.com/whdc/DevTools/WDK/DTM.mspx>

Please check regularly for test kit updates from Microsoft. Please ensure latest filters updated prior to WHQL run.

Operating Systems	Notes	WHQL Testkit
Windows 7 Windows 7 64-bit	<a href="#">WLK1.4 for Windows 7</a>	<a href="#">WLK1.4 for Windows 7</a>
Windows Vista Windows Vista 64-bit	<a href="#">WLK1.4 for Windows Vista SP1</a>	<a href="#">WLK1.4 for Windows Vista SP1</a>

## Errata and Contingencies

Operating System	Failing Test	Expiry Date	ID Number	Type	Error Description
Windows 7 Windows 7 64-bit	Aero Acceptance Test	7/15/2010	1294	Erratum	The Aero Acceptance Test is exposed for Windows 7 Ultra Mobile System Submissions. However, the requirement this test enforces is only required for Desktop, Mobile and All-In-One Windows 7 PC's. This errata covers ANY failures in the AeroAt.exe's test log, as long as the test completes. Note the test should still run to completion and create a log file, this errata would not cover hangs or crashes in the user mode display driver.
Windows 7 Windows 7 64-bit	Class Driver AC3 Test - Win7 (System)	6/1/2010	1256	Erratum	Run AC3 test on a system with the Microsoft HD Audio class driver installed. Expected results: All AC3 kernel streaming data ranges should advertise MinimumBitsPerSample = 16 and MaximumBitsPerSample = 16. Actual results: HD Audio class driver sometimes advertises MaximumBitsPerSample = 24.
Windows 7 Windows 7 64-bit	1) Class Driver Fidelity Test - Win7 (System, Manual)  2) Fidelity Test - Win7 (System, Manual)	12/31/2009	1238	Erratum	Fidelity Test now includes a "Render Power Transition" test. This preview filter covers all errors in this new test of SYSFUND-0050.
Windows 7 Windows 7 64-bit	Class Driver Fidelity Test - Win7 (System, Manual)	12/1/2009	598	Erratum	The European Union requires the headphone output level to be $\leq 150$ mVrms for headphone jacks. There's a note in WLP requirement AUDIO-0006 that states, in the presence of regional regulations, the output level requirement for headphones is dropped from $\geq 1000$ mVrms to $\geq 120$ mVrms. This provides freedom for manufacturers to meet both the EU $\leq 150$ mVrms @ 32 Ohms and the WLP $\geq 120$ mVrms @ 32 Ohms requirements. The Fidelity Test tests headphones at 300 Ohm load, though. Without knowledge of the output impedance at the jack, the test cannot extrapolate what the output level at 32 Ohms would have been from the output level at 300 Ohms. The test assumes that the output level at 32 Ohms will be *less* than the output level at 300 Ohms, though. So any measurement $\geq 120$ mVrms at 300 Ohms "could be" a passing result, depending on the output impedance.
Windows 7 Windows 7 64-bit	PCI Hardware Compliance Test For Systems	12/31/2009	125	Erratum	Assertion 4BA8F23A-6BB1-48EE-88D8-ED1A3ECD34B9 SSVID register of the Subsystem ID and Subsystem Vendor ID Capability table must be read-only . Assertion 6B0F606E-DBB3-4B8C-8879-32B302412EB8 SSID register of the Subsystem ID and Subsystem Vendor ID Capability table must be read-only . Assertion B576282C-5C66-4253-A275-257F5D49EFEF SSVID register of the Subsystem ID and Subsystem Vendor ID Capability table cannot have a value of 0h. These are valid failures but are not a requirement till January 2009. A filter is being created for the above assertions for this particular device. Added failure: Assertion 7A5587BC-5646-4DC4-9A5D-22F85AB2204E PCI Express ports and bridges must implement Subsystem ID and Subsystem Vendor ID Capability.
Windows 7 Windows 7 64-bit	PCI Hardware Compliance Test For Systems	6/1/2010	1543	Erratum	This happens because the PCI Compliance test assumes that if the Data Link Layer Link Active Reporting Capable bit in the Link Capabilities register for a given PCIe port is set then that indicates that the Data Link Layer Link Active bit will also be set. This is an incorrect assumption because the Data Link Layer Link Active bit can be reset when there is no device below the port. This assertion needs to be removed from the PCIHCT. The current architecture of the PCIHCT prevents it from knowing whether devices exist below a bridge/port.

Windows 7 Windows 7 64-bit	UAA Test - Win7 (System)	12/1/2009	513	Erratum	UAA Test requires the Traffic Priority bit to be read/write - however there are two specs that apply, and they conflict. One says the bit must be read/write, the other says it must be read-only. Contact has been made with the author of both specs (Intel) but until this point is clarified we cannot fail submissions containing this test failure.
Windows 7 Windows 7 64-bit	Wave Test - Win7 (System)	6/1/2010	1281	Erratum	Run "Data Intersection Test\Capture Streaming\Check Supported Formats" out of WaveTest on a system containing audio devices that are "disabled" via the Sound Control panel. Expected results: should succeed. Actual results: fail with "Failed to find any endpoints for the current pin" and "Failed to decide if current data intersection test should be skipped"
Windows 7 Windows 7 64-bit	WDDM CCD Test for Forced Projection	6/1/2010	1268	Erratum	The WDDM CCD Test for forced projection test fails due to not recognizing SDTV dongle as a forcible target.
Windows 7 Windows 7 64-bit	Windows Client System Check For WDDM 1.1 Display Driver Support	12/1/2009	1262	Erratum	The Windows Client System Check for WDDM 1.1 Display Driver Support test will be a preview test until December 9, 2009 At which time the requirement for Graphic drivers to be WDDM1.1 version will be enforced. The test is in both the Device program (Display Adapter and Chipset) and the System kit for Windows 7 logo programs.

## Test Notes

Operating System	Test	Description
Windows 7 and Vista	BIOS download	Internal: <a href="http://bios.intel.com/downloads/">http://bios.intel.com/downloads/</a> External: <a href="http://www.intel.com/">http://www.intel.com/</a> click on Support and Download
Windows 7 and Vista	BIOS setup	Please make sure the BIOS setting are as below, otherwise use default settings.  System Date and Time: Current date and time Peripheral Configuration: Enable all onboard component (Except CIR) Drive Configuration: Set to IDE Chipset Configuration: Enable HPET ACPI Suspend State: Set to <S3 State> Boot Device Priority: set <Hard Disk Driver> to first  Note: Enhanced Consumer IR (CIR) component is not supported under Windows7.
Windows 7 and Vista filter update	WLK WHQL test	<a href="http://winqual.microsoft.com/member/SubmissionWizard/LegalExemptions/filterupdates.cab">http://winqual.microsoft.com/member/SubmissionWizard/LegalExemptions/filterupdates.cab</a>
Special H/W that use to PASS the test	None	None