



Motherboard Logo Program (MLP)

# Intel® Desktop Board DH67CL

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## MLP Report

1/31/2011

**Purpose:**

This report describes the DH67CL 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.msp">http://www.microsoft.com/whdc/hwtest/default.msp</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 DH67CL 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)
DH67CL	BLH6710H.86A.0076.2010.1115.1959	N/A - all technologies logo'd
<b>Processor</b>		
Speed	3.4GHz	
Family	Intel Core i7 CPU 2600	
Bus Speed	1333 MHz	
<b>Motherboard</b>		
Board AA #	G10212	
Board FAB #	200 (eg. 10x for fab A, 20x for fab B and etc)	
<i>* 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.</i>		
<b>System Memory</b>		
Speed	Dual Channel, DDR3, 1333MHz	
Memory Type	DIMM	
Connector Type	DDR3, 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 Ultimate
Windows Vista and 64-bit	<input checked="" type="checkbox"/>	Vista Ultimate with Service Pack 2
Windows Vista Basic and 64-bit	<input type="checkbox"/>	Vista Basic with Service Pack 2

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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
<b>Chipset Update Utility</b> Intel® Chipset Software Utility	Windows Vista	V9.2.0.1015	INF_allIOS_9.2.0.1015_PV
	Windows Vista 64-bit	V9.2.0.1015	INF_allIOS_9.2.0.1015_PV
<b>Graphics</b> Intel® HD Graphics Family	Windows Vista	V8.15.10.2219	GFX_Vista32_Win7_32_8.15.10.2219_PV
	Windows Vista 64-bit	V8.15.10.2219	GFX_Vista64_Win7_64_8.15.10.2219_PV
<b>Audio</b> Realtek	Windows Vista	V6.0.1.6215	AUD_Vista_Win7_6.0.1.6215_PV
	Windows Vista 64-bit	V6.0.1.6215	AUD_Vista_Win7_6.0.1.6215_PV
<b>LAN</b> Intel® 82579V Gigabit	Windows Vista	V11.8.74.0	LAN_allIOS_11.8.74.0_PV
	Windows Vista 64-bit	V11.8.74.0	LAN_allIOS_11.8.74.0_PV
<b>MEI</b> Intel® Management Engine Interface	Windows Vista	V 7.0.0.1118	MEI_allIOS_7.0.0.1135_PV
	Windows Vista 64-bit	V 7.0.0.1118	MEI_allIOS_7.0.0.1135_PV

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

Technology	OS	Version	Package version
<b>Chipset Update Utility</b> Intel® Chipset Software Utility	Windows 7	V9.2.0.1015	INF_allIOS_9.2.0.1015_PV
	Windows 7 64-bit	V9.2.0.1015	INF_allIOS_9.2.0.1015_PV
<b>Graphics</b> Intel® HD Graphics Family	Windows 7	V8.15.10.2219	GFX_Vista32_Win7_32_8.15.10.2219_PV
	Windows 7 64-bit	V8.15.10.2219	GFX_Vista64_Win7_64_8.15.10.2219_PV
<b>Audio</b> Realtek	Windows 7	V6.0.1.6215	AUD_Vista_Win7_6.0.1.6215_PV
	Windows 7 64-bit	V6.0.1.6215	AUD_Vista_Win7_6.0.1.6215_PV
<b>LAN</b> Intel® 82579V Gigabit	Windows 7	V11.8.74.0	LAN_allIOS_11.8.74.0_PV
	Windows 7 64-bit	V11.8.74.0	LAN_allIOS_11.8.74.0_PV
<b>MEI</b> Intel® Management Engine Interface	Windows 7	V 7.0.0.1118	MEI_allIOS_7.0.0.1135_PV
	Windows 7 64-bit	V 7.0.0.1118	MEI_allIOS_7.0.0.1135_PV

## Windows Logo Kits Used (WLK)

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

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="#">WLK1.5 for Windows 7</a>	<a href="#">WLK1.5 for Windows 7</a>
Windows Vista Windows Vista 64-bit	<a href="#">WLK1.5 for Windows Vista SP2</a>	<a href="#">WLK1.5 for Windows Vista SP2</a>

## Errata and Contingencies



Operating System	Failing Test	Expiry Date	ID Number	Type	Error Description
Windows Vista Windows Vista 64bit Windows 7 Windows 7 64-bit	1) HDAudio Class Driver Fidelity Test - Vista (System, Manual)  3) Class Driver Fidelity Test - Win7 (System, Manual)  4) Fidelity Test - Win7 (System, Manual)	1/31/2011	1801	Erratum	There is a test bug which causes the measurement of system noise during Render Power Transition Test to be about 3 dB worse than it should be. This filter forgives errors up to 6 dB.
Windows Vista Windows Vista 64bit	HDAudio Class Driver Fidelity Test - Vista (System, Manual)	7/31/2011	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 Vista Windows Vista 64bit Windows 7 Windows 7 64-bit	1) HDAudio Class Driver Test - Vista or Server08 (System)  2) Class Driver AC3 Test - Win7 (System)	6/30/2025	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 Vista Windows Vista 64bit	HDAudio Class Driver Test - Vista or Server08 (System)	1/31/2011	142	Erratum	HDMI is required to support 44.1 kHz on Windows 7 The Windows Vista HD Audio class driver does not support 44.1 kHz sample rates. There is an errata to cover this violation of AUDIO-0023. It was mistakenly applied to third-party drivers. As of Windows 7, the Windows Vista HD Audio class driver supports 44.1 kHz sample rates on hardware that advertises support for it. AUDIO-0023 is applicable. This is a filter to allow vendors to ship with systems that violated AUDIO-0023 but were incorrectly filtered by the Vista filter. Hardware that does not support 44.1 needs to be updated to support 44.1, and advertise that support in a way that the Microsoft HD Audio class driver can pick up on. Third-party drivers need to relay this support to the OS correctly.
Windows Vista Windows Vista 64bit	HDAudio Class Driver Test - Vista or Server08 (System)	1/31/2011	1444	Erratum	Errata 1444 PREVIEW FILTER - HDMI is required to support 44.1 kHz on Windows 7 The Windows Vista HD Audio class driver does not support 44.1 kHz sample rates. There is an errata to cover this violation of AUDIO-0023. It was mistakenly applied to third-party drivers. As of Windows 7, the Windows Vista HD Audio class driver supports 44.1 kHz sample rates on hardware that advertises support for it. AUDIO-0023 is applicable. This is a preview Errata to allow vendors to ship with systems that violated AUDIO-0023 but were incorrectly filtered by the Vista filter. Hardware that does not support 44.1 needs to be updated to support 44.1, and advertise that support in a way that the Microsoft HD Audio class driver can pick up on. Third-party drivers need to relay this support to the OS correctly.
Windows Vista Windows Vista 64bit Windows 7 Windows 7 64-bit	PCI Hardware Compliance Test For Systems	6/1/2011	401	Erratum	The following PCI Compliance test failure is acceptable: Bit 15 (Bridge Configuration Retry Enable) in the Device Control register (offset 8h) in the PCI Express Capability table must be read-only and always return 0 as it is reserved for devices other than PCI Express to PCI/PCI-X Bridges. Assertion 13A41D3E-2576-41DC-A67C-525DA3637CEA This failure is acceptable because this is a PCIe 1.1 feature and the WLP requires compliance with only PCIe 1.0a.



Windows Vista Windows Vista 64bit Windows 7 Windows 7 64-bit	PCI Hardware Compliance Test For Systems	6/1/2011	923	Erratum	Assertion FAE18121-9177-4FB2-A081-0D04C285EFF2 Bit range 15:0 (Extended Capability ID) in the Enhanced Capability Header register (offset 0h) in the Unrecognized Enhanced Capability ID 13 table is Dh. It must be in the range [0x0 - 0xB] as all other Capability IDs are reserved.
Windows Vista Windows Vista 64bit Windows 7 Windows 7 64-bit	1)UAA Test - Vista or Server08 (System)  2) UAA Test - Win7 (System)	6/1/2011	1300	Erratum	HD Audio pin configuration document calls out setting Port Connectivity to No Connection as the way to turn a pin off in a particular system. UAA Test incorrectly tests such pins.
Windows Vista Windows Vista 64bit Windows 7 Windows 7 64-bit	1)UAA Test - Vista or Server08 (System)  2) UAA Test - Win7 (System)	2/28/2011	1299	Erratum	Preview filter - Jack Detect Override on digital pin widgets Errata 1299 The HD Audio configuration default register (7.3.3.31 in the HD Audio specification) includes a "Jack Detect Override" flag that can be used to indicate that although a pin widget would normally be capable of jack detection, there is something about this particular system that causes this to be impossible. This was intended to be used, for example, for analog pin widgets that are connected to RCA jacks, which do not allow for impedance detection. Some digital pin widgets are using the Presence Detect pin sense response to indicate that a digital handshake has occurred - indeed, HDMI pins have entire DCNs built around this concept, and it applies equally well to S/PDIF pins. A digital converter that supports presence detection should be able to do so in any system, so the "Jack Detect Override" concept should not apply to digital pins.
Windows Vista Windows Vista 64bit Windows 7 Windows 7 64-bit	1)UAA Test - Vista or Server08 (System)  2) UAA Test - Win7 (System)	6/1/2015	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 Vista Windows Vista 64bit Windows 7 Windows 7 64-bit	USB Host Controller Compliance (Automated)	6/1/2012	1787	Erratum	Errata 1787 This Preview Test is being filtered until the expiration date of this Errata. After the expiration date of this filter these failures must be fixed to have a passing submission. Microsoft strongly recommends that these errors be investigated prior to this test or job being required for submission. XHCI spec compliance test is in preview
Windows Vista 64bit	System - Common Scenario Stress With IO	6/1/2011	1537	Erratum	The Disable Enable with IO test enumerates devices that can be disabled early in the boot cycle. Some devices can be disabled during the boot process, but later cannot be disabled. Since the test does not check the device status each time, it may attempt to disable a device that cannot be disabled.
Windows 7 Windows 7 64-bit	Graphics HDMI System Test (Manual)	6/1/2011	1717	Erratum	GraphicsHDMITest: should ignore pin widgets that have "Port Connectivity" set to "No Physical Connection"
Windows 7 Windows 7 64-bit	1)Graphics HDMI System Test (Manual)  2) UAA Test - Win7 (System)	12/31/2011	1666	Erratum	graphics-hdmi-test-intel-two-of-three
Windows 7 Windows 7 64-bit	Graphics HDMI System Test (Manual)	6/1/2011	1945	Erratum	Failure is due to the ELDv2 PortId not matching the graphics adapter LUID. This cannot be enforced currently. In the future, video drivers will be required to program the ELDv2 PortId with either, The AdapterLUID for the corresponding display adapter - OR- 0

## 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 AHCI 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://winqval.microsoft.com/member/SubmissionWizard/LegalExemptions/filterupdates.cab">http://winqval.microsoft.com/member/SubmissionWizard/LegalExemptions/filterupdates.cab</a>
Special H/W that use to PASS the test	None	None