Motherboard Logo Program (MLP)

Intel® Desktop Board DH67CF

MLP Report

3/24/2011

Purpose:

This report describes the DH67CF Motherboard Logo Program testing run conducted by Intel Corporation.

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Introduction

Terms and Definitions

Term	Definitions
WHQL	Windows* Hardware Qualification Lab
WLK	Windows Logo Kits
MLP	Motherboard Logo Program. For further information see: http://www.microsoft.com/whdc/hwtest/default.mspx
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: http://winqual.microsoft.com/HCL/ProductList.aspx?m=v&cid=105&g=s

Desktop Board Configuration

Desktop Board DH67CF Final Configuration Report: Completion of MLP

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

Board Information

Product Code[1]	BIOS String/Model	Technologies NOT Logo'd (yet)
DH67CF	BLH6710H.86A.0078.2010.1118.1944	N/A - all technologies logo'd
Processor		
Speed	3.40GHz	
Family	Intel Core i7 CPU 2600	
Bus Speed	100 MHz	
Motherboard		
Board AA #	G10215	
Board FAB #	200 (eg. 10x for fab A, 20x for fab B and etc)	
* 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.		
System Memory		
Speed	Dual Channel, DDR3, 1333MHz	
Memory Type	DIMM	
Connector Type	DDR3, 240 Pin	
Power Management		
BIOS Default	S3	
Operating System Tested		
	Check Tested	**Comments**
Windows 7 and 64-bit	☑	Windows 7 Ultimate
Windows Vista and 64-bit	☑	Vista Ultimate with Service Pack 2
Windows Vista Basic and 64-bit	☐	Vista Basic with Service Pack 2

[1] 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**	V9.2.0.1015	INF_allOS_9.2.0.1015_PV
	Windows Vista 64-bit	V9.2.0.1015	INF_allOS_9.2.0.1015_PV
Graphics Intel® HD Graphics	**Windows Vista**	V8.15.10.2238	GFX_Vista32_Win7_32_8.15.10.2238_PV
	Windows Vista 64-bit	V8.15.10.2238	GFX_Vista64_Win7_64_8.15.10.2238_PV
Audio Realtek	**Windows Vista**	V6.0.1.6236	AUD_Vista_Win7_6.0.1.6236_PV
	Windows Vista 64-bit	V6.0.1.6236	AUD_Vista_Win7_6.0.1.6236_PV
LAN Intel® 82579V Gigabit	**Windows Vista**	V11.8.78.0	LAN_allOS_11.8.81.0_PV
	Windows Vista 64-bit	V11.8.78.0	LAN_allOS_11.8.81.0_PV
MEI Intel® Management Engine Interface	**Windows Vista**	V 7.0.0.1118	MEI_allOS_7.0.1.1141_PV
	Windows Vista 64-bit	V 7.0.0.1118	MEI_allOS_7.0.1.1141_PV

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**	V9.2.0.1015	INF_allOS_9.2.0.1015_PV
	Windows 7 64-bit	V9.2.0.1015	INF_allOS_9.2.0.1015_PV
Graphics Intel® HD Graphics	**Windows 7**	V8.15.10.2238	GFX_Vista32_Win7_32_8.15.10.2238_PV
	Windows 7 64-bit	V8.15.10.2238	GFX_Vista32_Win7_32_8.15.10.2238_PV
Audio Realtek	**Windows 7**	V6.0.1.6236	AUD_Vista_Win7_6.0.1.6236_PV
	Windows 7 64-bit	V6.0.1.6236	AUD_Vista_Win7_6.0.1.6236_PV
LAN Intel® 82579V Gigabit	**Windows 7**	V11.8.81.0	LAN_allOS_11.8.81.0_PV
	Windows 7 64-bit	V11.8.81.0	LAN_allOS_11.8.81.0_PV
MEI Intel® Management Engine Interface	**Windows 7**	V7.0.0.1118	MEI_allOS_7.0.0.1141_PV
	Windows 7 64-bit	V7.0.0.1118	MEI_allOS_7.0.0.1141_PV

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	WLK1.5 for Windows 7	WLK1.5 for Windows 7
Windows Vista Windows Vista 64-bit	WLK1.5 for Windows Vista SP2	WLK1.5 for Windows Vista SP2

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) Fidelity Test - Vista (System, Manual) 2) HDAudio Class Driver Fidelity Test - Vista (System, Manual) 3)Class Driver Fidelity Test - Win7 (System, Manual) 4)Fidelity Test - Win7 (System, Manual)	6/1/2011	1801	Erratum	Fidelity Render Power Transition test does not work properly. The test is not going to be enforced until a fix can be released.
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	The HD Audio class driver hdaudio.sys exposes AC-3 data ranges on S/PDIF Kernel Streaming pins incorrectly. The compressed AC-3 transport is "stereo", "16-bit", and at the same sample rate as the uncompressed format. As such, AC-3 data ranges are expected to have MaximumChannels = 2, and MinimumBitDepth = MaximumBitDepth = 16. However, the HD Audio class driver sometimes incorrectly exposes a MaximumBitDepth of 24 or even 32.
Windows Vista Windows Vista 64bit	HDAudio Class Driver Test - Vista or Server08 (System)	6/1/2011	142	Erratum	The Vista version of the Microsoft HD Audio class driver only plays 48 kHz sample rate audio over HDMI audio devices; it does not play the required 44.1 kHz sample rate. The Windows 7/Server 2008 R2 version of the Microsoft HD Audio class driver, on the other hand, will play both 44.1 and 48 kHz sample rate audio over HDMI devices. This errata filter thus only applies to Vista and the initial release of Windows Server 2008 (not to Windows 7 or Windows Server 2008 R2.)
Windows Vista Windows Vista 64bit	1) HDAudio Class Driver Test - Vista or Server08 (System)	12/31/2010	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	PCI Hardware Compliance Test For Systems	12/01/2012	1241	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 Link

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 occured - 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	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	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 XHCI spec compliance test is in preview For further details visit: https://winqual.microsoft.com/ec/
Windows 7 Windows 7 64-bit	UAA Test – Win7(System) Graphics HDMI System Test (Manual)	6/1/2011	1666	Erratum	graphics-hdmi-test-intel-two-of-three
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 Vista Windows Vista 64bit	1) Fidelity Test - Vista (System, Manual) 2) HDAudio Class Driver Fidelity Test - Vista (System, Manual) 3)Class Driver Fidelity Test - Win7 (System, Manual) 4)Fidelity Test - Win7 (System, Manual)	7/31/2011	598	Erratum	EU restrictions place a cap on the output level of headphone jacks at 32 Ohm load: headphones are not allowed to have an electrical output of more than 150 mV at that load. We test headphone jacks at 300 Ohm load; the relationship between the output at 32 Ohms and the output at 320 Ohms depends on the output impedance of the headphone jack. In particular, if a headphone jack meets the EU requirement of X <= 150 mV at 32 Ohms, depending on the output impedance, it could output a huge amount of power at 300 Ohms, or very slightly over X mV. Since we require X >= 120 mV at 32 Ohms, absent knowledge of the output impedance we can only require X >= 120 mV at 300 Ohms. 120 mV is -18.42 dBV. Any headphone output level at 32 Ohms that is less than -18.42 dBV is a legitimate failure, even if it is targeted at EU compliance. Any headphone output level greater than 1 Vrms (0.707 Vrms for mobile systems) is a legitimate pass, regardless of EU compliance. This errata covers output level failures for headphone jacks between -18.42 dBV and 1 Vrms/0 dBV (0.707 Vrms/-6.93 dBV for mobile systems)) in accordance with note 6 of the WLP fidelity requirements.

Test Notes

Operating System	Test	Description
Windows 7 and Vista	BIOS download	Internal: http://bios.intel.com/downloads/ External: http://www.intel.com/ 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	http://winqual.microsoft.com/member/SubmissionWizard/LegalExemptions/filterupdates.cab
Special H/W that use to PASS the test	None	None