Motherboard Logo Program (MLP)

# Intel® Desktop Board DH67BL

# MLP Report

12/16/2010

**Purpose:**

This report describes the DH67BL Motherboard Logo Program testing run conducted by Intel Corporation.

THIS TEST REPORT IS PROVIDED "AS IS" WITH NO WARRANTIES WHATSOEVER, INCLUDING ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY WARRANTY OTHERWISE ARISING OUT OF ANY PROPOSAL, SPECIFICATION OR SAMPLE.

Information in this document is provided in connection with Intel products. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by the sale of Intel products. Except as provided in Intel's Terms and Conditions of Sale for such products, Intel assumes no liability whatsoever, and Intel disclaims any express or implied warranty, relating to sale and/or use of Intel products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright or other intellectual property right. Intel products are not intended for use in medical, life saving, or life sustaining applications.

Intel retains the right to make changes to its test specifications at any time, without notice.

The hardware vendor remains solely responsible for the design, sale and functionality of its product, including any liability arising from product infringement or product warranty.

Intel® Core™ i7 and Intel® are trademarks of Intel Corporation in the U.S. and other countries.

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

Copyright ° 2009, Intel Corporation. All rights reserved.

# Contents


Introduction ..... 4
Terms and Definitions ..... 4
Desktop Board Configuration ..... 5
Desktop Board DH67BL Final Configuration Report: Completion of MLP ..... 5
Board Information ..... 5
Product Code ..... 5
Processor ..... 5
Motherboard ..... 5
System Memory ..... 5
Power Management ..... 5
Operating System Tested ..... 5
Onboard Integrated Devices and Driver for Vista 32-bit and 64-bit ..... 6
Onboard Integrated Devices and Driver for Windows 7 32-bit and 64-bit ..... 7
Windows Logo Kits Used (WLK) ..... 7
Errata and Contingencies ..... 8
Test Notes ..... 12

# 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 DH67BL 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) |
|---|---|---|
| DH67BL | BLH6710H.86A.0062.2010.1025.1539 | N/A - all technologies logo'd |
| **Processor** | | |
| Speed | 3.4GHz | |
| Family | Intel Core i7 CPU 2600 | |
| Bus Speed | 1333 MHz | |
| **Motherboard** | | |
| Board AA # | G10189 | |
| Board FAB # | 201 (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**<br>Intel® Chipset Software Utility | **Windows Vista** | V9.2.0.1015 | INF_allOS_9.2.0.1015_PV.zip |
| | **Windows Vista 64-bit** | V9.2.0.1015 | INF_allOS_9.2.0.1015_PV.zip |
| **Graphics**<br>Intel® HD Graphics Family | **Windows Vista** | V8.15.10.2219 | GFX_Vista32_Win7_32_8.15.10.2219_PV.zip |
| | **Windows Vista 64-bit** | V8.15.10.2219 | GFX_Vista64_Win7_64_8.15.10.2219_PV.zip |
| **Audio**<br>Realtek | **Windows Vista** | V6.0.1.6215 | AUD_Vista_Win7_6.0.1.6215_PV.zip |
| | **Windows Vista 64-bit** | V6.0.1.6215 | AUD_Vista_Win7_6.0.1.6215_PV.zip |
| **LAN**<br>Intel® 82579V Gigabit | **Windows Vista** | V11.8.74.0 | LAN_allOS_11.8.74.0_PV.zip |
| | **Windows Vista 64-bit** | V11.8.74.0 | LAN_allOS_11.8.74.0_PV.zip |
| **MEI**<br>Intel® Management Engine Interface | **Windows Vista** | V 7.0.0.1118 | MEI_allOS_7.0.0.1135_PV.zip |
| | **Windows Vista 64-bit** | V 7.0.0.1118 | MEI_allOS_7.0.0.1135_PV.zip |

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

| Technology | OS | Version | Package version |
|---|---|---|---|
| **Chipset Update Utility**<br>Intel® Chipset Software Utility | Windows 7 | V9.2.0.1015 | INF_allOS_9.2.0.1015_PV.zip |
| | Windows 7 64-bit | V9.2.0.1015 | INF_allOS_9.2.0.1015_PV.zip |
| **Graphics**<br>Intel® HD Graphics Family | Windows 7 | V8.15.10.2219 | GFX_Vista32_Win7_32_8.15.10.2219_PV.zip |
| | Windows 7 64-bit | V8.15.10.2219 | GFX_Vista64_Win7_64_8.15.10.2219_PV.zip |
| **Audio**<br>Realtek | Windows 7 | V6.0.1.6215 | AUD_Vista_Win7_6.0.1.6215_PV.zip |
| | Windows 7 64-bit | V6.0.1.6215 | AUD_Vista_Win7_6.0.1.6215_PV.zip |
| **LAN**<br>Intel® 82579V Gigabit | Windows 7 | V11.8.74.0 | LAN_allOS_11.8.74.0_PV.zip |
| | Windows 7 64-bit | V11.8.74.0 | LAN_allOS_11.8.74.0_PV.zip |
| **MEI**<br>Intel® Management Engine Interface | Windows 7 | V 7.0.0.1118 | MEI_allOS_7.0.0.1135_PV.zip |
| | Windows 7 64-bit | V 7.0.0.1118 | MEI_allOS_7.0.0.1135_PV.zip |

## 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<br>Windows 7 64-bit | WLK1.5 for Windows 7 | WLK1.5 for Windows 7 |
| Windows Vista<br>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<br>Windows Vista 64bit<br>Windows 7<br>Windows 7 64-bit | 1) Fidelity Test - Vista (System, Manual)<br><br>2) HDAudio Class Driver Fidelity Test - Vista (System, Manual)<br><br>3)Class Driver Fidelity Test - Win7 (System, Manual)<br><br>4)Fidelity Test - Win7 (System, Manual) | 1/31/2011 | 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 7<br>Windows 7 64-bit | Class Driver Fidelity Test - Win7 (System, Manual) | 6/1/2011 | 1012 | Erratum | Fidelity plays a quiet (-60 dB FS) test tone during System Activity test which is filtered out of the noise level measurement.<br>However, Fidelity is quite prone to glitches during system activity... the glitches leak into the measured noise, causing false failures. |
| Windows Vista<br>Windows Vista 64bit<br>Windows 7<br>Windows 7 64-bit | 1) HDAudio Class Driver Test - Vista or Server08 (System)<br><br>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.<br>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.<br>However, the HD Audio class driver sometimes incorrectly exposes a MaximumBitDepth of 24 or even 32. |
| Windows Vista<br>Windows Vista 64bit | HDAudio Class Driver Test - Vista or Server08 (System) | 1/31/2011 | 142 | Erratum | Errata 142 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.<br>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<br>Windows Vista 64bit | HDAudio Class Driver Test - Vista or Server08 (System) | 1/31/2011 | 1444 | Erratum | PREVIEW FILTER - HDMI is required to support 44.1 kHz on Windows 7<br>Errata 1444The 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.<br>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.<br>This is a preview filter to allow vendors to ship with systems that violated AUDIO-0023 but were incorrectly filtered by the Vista filter.<br>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.<br>Third-party drivers need to relay this support to the OS correctly. |
| Windows Vista<br>Windows Vista 64bit<br>Windows 7<br>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<br>Windows Vista 64bit<br>Windows 7<br>Windows 7 64-bit | PCI Hardware Compliance Test For Systems | 6/1/2011 | 923 | Erratum | Assertion FAE18121-9177-4FB2-A081-0D04C285EFF2<br>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<br>Windows Vista 64bit<br>Windows 7<br>Windows 7 64-bit | 1)UAA Test - Vista or Server08 (System)<br><br>2) UAA Test - Win7 (System) | 6/1/2011 | 1300 | Erratum | UAA Test wrongly tests pin widgets that have their Configuration Default register's Port Connectivity field set to No Connection.<br>The Microsoft HD Audio Pin Configuration guidelines specifically call out "set Port Connectivity to No Connection" as the official way to turn a pin off. UAA Test should ignore any such pins, as will the Microsoft HD Audio class driver. |
| Windows Vista<br>Windows Vista 64bit<br>Windows 7<br>Windows 7 64-bit | 1)UAA Test - Vista or Server08 (System)<br><br>2) UAA Test - Win7 (System) | 2/28/2011 | 1299 | Erratum | Preview filter - Jack Detect Override on digital pin widgets<br>Errata 1299<br>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.<br>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.<br>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.<br>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<br>Windows Vista 64bit<br>Windows 7<br>Windows 7 64-bit | 1)UAA Test - Vista or Server08 (System)<br><br>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<br>Windows Vista 64bit<br>Windows 7<br>Windows 7 64-bit | USB Host Controller Compliance (Automated) | 6/1/2012 | 1787 | Erratum | Errata 1787<br>XHCI spec compliance test is in preview<br>For further details visit: https://winqual.microsoft.com/ec/ |
| Windows Vista 64bit | System - Common Scenario Stress With IO | 6/1/2011 | 1537 | Erratum | The Common Scenario Stress 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<br>Windows 7 64-bit | Graphics HDMI System Test (Manual) | 6/1/2011 | 1717 | Erratum | HDMI Audio pins that have "port connectivity" set to "no physical connection" should be ignored as they are not used by the system. Graphics HDMI Test is false-failing systems that have them. |
| Windows 7<br>Windows 7 64-bit | 1)Graphics HDMI System Test (Manual)<br><br>2) UAA Test - Win7 (System | 12/31/2011 | 1666 | Erratum | HDMI audio codecs sometimes expose more HDMI audio pins (audio outputs) than can be plugged in at any given time, due to resource constraints in the video hardware.<br>Test will need to be rejiggered to allow testing each in turn.<br><br>HDMI audio devices are backed by video pipes; if a graphics subsystem exposes three output ports, but only has two video pipes, it is not possible to get all three HDMI audio endpoints "active" simultaneously. |
| Windows 7<br>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: http://bios.intel.com/downloads/<br>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.<br><br>System Date and Time: Current date and time<br>Peripheral Configuration: Enable all onboard component (Except CIR)<br>Drive Configuration: Set to AHCI<br>Chipset Configuration: Enable HPET<br>ACPI Suspend State: Set to <S3 State><br>Boot Device Priority: set <Hard Disk Driver> to first<br><br>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 |