Previously Logo'd Motherboard Program (PLMP)

Intel® Desktop Board DH55HC

PLMP Report

47/23/2010

Purpose:

This report describes the DH55HC Previously Logo'd Motherboard Program testing run conducted by Intel Corporation.

Contents

Introduction

Terms and Definitions

Term	Definitions
WHQL	Windows* Hardware Qualification Lab
WLK	Windows Logo Kits
PLMP	Previously Logo'd 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 DH55HC Final Configuration Report: Completion of PLMP

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

Board Information

Product Code[1]	BIOS String/Model	Technologies NOT Logo'd (yet)
DH55HC	TCIBX10H.86A.0027.2009.1119.1517	N/A - all technologies logo'd
Processor		
Speed	3.46GHz	
Family	Intel® Core™ i5	
Bus Speed / DMI	2.5 GT/s	
Motherboard		
Board AA #	E70933	
Board FAB #	501	
* 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 Windows 7 32-bit and 64-bit

Technology	OS	Version	Package version
Chipset Update Utility Intel® Chipset Software Utility	**Windows 7**	9.1.1.1013	9.1.1.1025
	Windows 7 64-bit	9.1.1.1013	9.1.1.1025
Graphics Intel® Graphics Media Accelerator	**Windows 7**	8.15.10.2104	15.17.3.2104
	Windows 7 64-bit	8.15.10.2104	15.17.3.64.2104
Audio Realtek	**Windows 7**	6.0.1.5964	5964
	Windows 7 64-bit	6.0.1.5964	5964
LAN Intel®	**Windows 7**	11.5.10.0	15.1
	Windows 7 64-bit	11.5.10.0	15.1

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

Errata and Contingencies

Operating System	Failing Test	Expire Date	ID Number	Filter Number	Type	Error Description
Windows 7 Windows 7 64-bit	GlitchFree WMV HD 720p video playback quality test	6/01/2010	1245	2842	Erratum	The GlitchFree WMV HD 720p video playback quality test enforces SYSFUND-0062 Case 2 and 3 were added to enhance the verification of the video playback test. These cases will be in preview state until this errata expires. If cases 2 or 3 of the GFHD test fail for any reason while this errata is active, then the failures should be fitered out. Cases 0 and 1 do not apply to this errata and remain a requirement.
Windows 7 Windows 7 64-bit	PCI Hardware Compliance Test For System	12/01/2010	401	385	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 7 Windows 7 64-bit	Graphics HDMI System Test (Manual)	12/01/2010	1717	2227	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 Windows 7 64-bit	Graphics HDMI System Test (Manual)	12/31/2011	1666	2128	Erratum	Intel HDMI audio codec exposes three HDMI audio pins (audio outputs) but there are only two video pipes so only two of the three can be plugged in at any given time. Test will need to be rejiggered to allow testing each in turn. This errata applies only to HDAUDIO\FUNC_01&VEN_8086&DEV_2804 and then only when pins 5 and 6 are both plugged in; pin 4 errors, which this errata covers.
Windows 7 Windows 7 64-bit	Graphics HDMI System Test (Manual)	12/31/2010	1945	2894	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. In the future, video drivers will be required to program the ELDv2 PortId with either, The AdapterLUID for the corresponding display adapter -OR- 0
Windows 7 Windows 7 64-bit	UAA Test	6/01/2010	1300	2190	Erratum	UAA Test wrongly tests pin widgets that have their Configuration Default register's Port Connectivity field set to No Connection. 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 7 Windows 7 64-bit	UAA Test	8/09/2010	1288	1587	Erratum	Preview Filter – Encoded Packet Type. The Intel HD Audio DCN 35-A, HDMI/High Bit Rate, repurposes bits 0 and 1 of the Pin Widget Control verb to be the Encoded Packet Type (for example, "native" or "high bit rate.) See section 7.3.3.13 of the DCN for further information: http://www.intel.com/standards/hdaudio/ The codec is expected to perform validation on EPT values set in this fashion. From the DCN: If the value written to this control does not correspond to a supported value as defined in the Pin Capabilities parameter, the control must either retain the previous value or take the value of 00, which will select the default native audio packet type.

Operating System	Failing Test	Expire Date	ID Number	Filter Number	Type	Error Description
Windows 7 Windows 7 64-bit	UAA Test	7/01/2011	1466	2195	Erratum	Preview Filter - Keepalive on low power digital outputs AUDIO-0062, effective June 1 2009, requires that any HD Audio codec that advertises EPSS support comply with the Intel HD Audio Low Power DCN. The Low Power DCN, in turn, says that support for EPSS is mandatory after July 1st 2011. Note the sentence "KeepAlive Enable is mandatory after July 1st 2011, if EPSS is reported set to 1."
Windows 7 Windows 7 64-bit	UAA Test	8/09/2010	1299	2365	Erratum	Preview filter - Jack Detect Override on digital pin widgets 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 7 Windows 7 64-bit	UAA Test	8/09/2010	1198	2908	Erratum	Preview Filter - Reserved "Impedance" bits in Pin Sense response to digital pin widgets The original HD Audio 1.0 specification contains a notion of "presence detect", using electrical impedance which was intended to apply only to analog pins. However, the language of the specification was such that it could be read to apply to digital pins as well - in particular, to S/PDIF pins. A DCN was released to extend the notion of presence detect to digital pins - in particular, to HDMI pins. This repurposed one of the impedance bits, which were thought to be unused in digital pins, to mean "ELD valid." The correct way for a S/PDIF pin to respond to a Pin Sense verb is to set the highest bit (Presence Detect) to 1 or 0 corresponding to whether a S/PDIF connection is active; set the ELD Valid bit to 0 (since there is no such thing as ELD for S/PDIF); and set the rest of the bits, which are reserved for digital pins, to 0.
Windows 7 Windows 7 64-bit	UAA Test	8/09/2010	1348	2927	Erratum	Preview Filter - ASP Channel Mapping The Intel HD Audio DCN 34-A2, HDMI/Multichannel, defines a mapping between digital converter channels and HDMI slots; see section 7.3.3.41 of the DCN. Much of the verbiage is generalized in DCN 36-A to apply equally to DisplayPort slots. The latest versions of all DCNs are posted on Intel's HD Audio standards page: http://www.intel.com/standards/hdaudio/ The default mapping from digital converter channels to slots is expected to be 0 --> 0, 1 --> 1, 2 --> ***3***, 3 --> ***2***, 4 --> 4, 5 --> 5, 6 --> 6, and 7 --> 7. Issue Resolution Update the hardware to default the converter-channel-to-HDMI-slot mapping according to the specification. When this Errata expires, the issue described will be considered a valid failure.

Operating System	Failing Test	Expire Date	ID Number	Filter Number	Type	Error Description
Windows 7 Windows 7 64-bit	UAA Test	8/09/2010	1299	2195	Erratum	Preview filter - Jack Detect Override on digital pin widgets. 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 7 Windows 7 64-bit	UAA Test	12/31/2010		2124 2125 2399	Contingency	Certain Intel codecs swallow the first response after a function group reset. Issue Resolution: Intel will fix this in future revisions of their codecs.
Windows 7 Windows 7 64-bit	UAA Test	6/01/2015	513	1394	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	Class Driver AC3 Test	6/01/2010		1890	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 7 Windows 7 64-bit	Signed Driver Check (Manual)	12/31/2010	1248	2701	Erratum	If a driver is found to be signed by Microsoft that is tested with the chklogo test, the message, ERROR: No Logo Level Attribute on file., is an invalid failure if followed by, This file has a 0 level Logo and followed by,Cannot match the device ID of the driver the device was test within an invidual assertion. Issue Resolution: Drivers that may have been logod but are not associated with a valid hardware ID are attributed incorrectly as unclassified drivers and incorrectly failed by this test.

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 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
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