



Motherboard Logo Program (MLP)

**Intel® Desktop Board**

**DH55PJ**

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**MLP Report**

3/24/2011

**Purpose:**

This report describes the DH55PJ 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 DH55PJ 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)
DH55PJ	TCIBX10H.86A.0032.2010.0402.1709	N/A - all technologies logo'd
<b>Processor</b>		
Speed	3.47GHz	
Family	Intel® Core™ i5 CPU 670	
Bus Speed	1333Mhz	
<b>Motherboard</b>		
Board AA #	E93812-100	
Board FAB #	A	
* 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	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	9.1.1.1025	9.1.1.1025
	Windows Vista 64-bit	9.1.1.1025	9.1.1.1025
<b>Graphics</b> Intel® Graphics Media Accelerator	Windows Vista	8.15.10.2057	15.16.8.2057
	Windows Vista 64-bit	8.15.10.2057	15.16.8.64.2057
<b>Audio</b> Realtek	Windows Vista	6.0.1.6039	6039
	Windows Vista 64-bit	6.0.1.6039	6039
<b>LAN</b> Intel® Gigabit Network Connection	Windows Vista	11.5.10.0	15.1
	Windows Vista 64-bit	11.5.10.0	15.1
<b>MEI</b> Intel® Management Engine Interface	Windows Vista	6.0.0.1179	6.0.31.1208
	Windows Vista 64-bit	6.0.0.1179	6.0.31.1208
<b>iAMT</b> Intel® Active Management Technology	Windows Vista	6.0.0.1179	6.0.31.1208
	Windows Vista 64-bit	6.0.0.1179	6.0.31.1208

### 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	9.1.1.1025	9.1.1.1025
	Windows 7 64-bit	9.1.1.1025	9.1.1.1025
<b>Graphics</b> Intel® Graphics Media Accelerator	Windows 7	8.15.10.2057	15.16.8.2057
	Windows 7 64-bit	8.15.10.2057	15.16.8.64.2057
<b>Audio</b> Realtek	Windows 7	6.0.1.6039	6039
	Windows 7 64-bit	6.0.1.6039	6039
<b>LAN</b> Intel® Gigabit Network Connection	Windows 7	11.5.10.0	15.1
	Windows 7 64-bit	11.5.10.0	15.1
<b>MEI</b> Intel® Management Engine Interface	Windows 7	6.0.0.1179	6.0.31.1208
	Windows 7 64-bit	6.0.0.1179	6.0.31.1208

iAMT Intel® Active Management Technology	Windows 7	6.0.0.1179	6.0.31.1208
	Windows 7 64-bit	6.0.0.1179	6.0.31.1208

## Windows Logo Kits Used (WLK)

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

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

## Errata and Contingencies

Operating System	Failing Test	Expiry Date	ID Number	Type	Error Description
Windows 7 Windows 7 64-bit Windows Vista Windows Vista 64-bit	1) Class Driver AC3 Test - Win7 (System)  2)HDAudio Class Driver Test - Vista or Server08 (System)	06/01/2010	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 7 Windows 7 64-bit Windows Vista Windows Vista 64-bit	PCI Hardware Compliance Test For Systems	12/01/2010	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 7 Windows 7 64-bit Windows Vista Windows Vista 64-bit	PCI Hardware Compliance Test For Systems	12/01/2010	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 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 Windows Vista Windows Vista 64-bit	1) Fidelity Test (System, Manual)  2) Class Driver Fidelity Test - Win7 (System, Manual)  3) HDAudio Class Driver Fidelity Test - Vista (System, Manual)	08/09/2010	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 7 Windows 7 64-bit Windows Vista Windows Vista 64-bit	1) Class Driver Fidelity Test - Win7 (System, Manual)  2) HDAudio Class Driver Fidelity Test - Vista (System, Manual)	07/31/2011	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 7 Windows 7 64-bit Windows Vista Windows Vista 64-bit	1)UAA Test - Win7 (System)  2)UAA Test - Vista or Server08 (System)	08/09/2010	1299	Erratum	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.



Windows 7 Windows 7 64-bit Windows Vista Windows Vista 64-bit	1)UAA Test - Win7 (System) 2)UAA Test - Vista or Server08 (System)	06/01/2010	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 7 Windows 7 64-bit Windows Vista Windows Vista 64-bit	1)UAA Test - Win7 (System) 2)UAA Test - Vista or Server08 (System)	08/09/2010	1198	Erratum	"High Definition Audio Device" devices need to comply with the Intel High Definition Audio spec, as well as revisions (known as Document Change Notifications, or DCNs.) One such DCN - in particular, DCN 34-A2 - clarified the behavior of "pin sense" verbs as applied to digital pins (S/PDIF, HDMI, and DisplayPort.) Prior to the DCN, the language of the spec was unclear and mistakenly implied that the "Impedance" bits could be used by digital pins. The DCN clarified this to say that Impedance bits are reserved for digital pins.
Windows 7 Windows 7 64-bit Windows Vista Windows Vista 64-bit	1)UAA Test - Win7 (System) 2)UAA Test - Vista or Server08 (System)	06/01/2015	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 7 Windows 7 64-bit Windows Vista Windows Vista 64-bit	1)UAA Test - Win7 (System) 2)UAA Test - Vista or Server08 (System)	07/01/2011	1466	Erratum	UAA Test - Intel Low Power DCN says "EPSS implies KeepAlive, but only after July 1st 2011"
Window Vista 64-bit	Hal Timer tests (HCT)	08/01/2010	1806	Erratum	The HAL Timer test can fail the KeStallExecutionProcessor Backoff Test case due to an issue with the processor implementation. This has been determined to be a problem with the test.
Window Vista	GlitchFree WMV HD 720p video playback quality test	06/01/2010	1245	Erratum	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 filtered out. Cases 0 and 1 do not apply to this errata and remain a requirement

## 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 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	<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