Motherboard Logo Program (MLP)

Intel® Desktop Board

DQ67EP

MLP Report

3/24/2011

Purpose:

This report describes the DQ67EP Motherboard Logo Program testing run conducted by Intel Corporation.

Contents

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 DQ67EP 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)
DQ67SW	SWQ6710H.86A.0038.2010.1227.1958	N/A - all technologies logo'd
Processor		
Speed	3.4GHz	
Family	Intel® Core i7-2600 D2	
Bus Speed	100 MHz	
Motherboard		
Board AA #	G12529	
Board FAB #	300	
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 32 and 64-bit	☑	Windows 7 Ultimate
Windows Vista 32 and 64-bit	☑	Windows Vista Ultimate with Service Pack 2

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[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	9.2.0.1016	9.2.0.1019
	Windows Vista 64-bit	9.2.0.1016	9.2.0.1019
On-board GFX Intel(R) HD Graphics Family	Windows Vista	8.15.10.2266	15.21.5.2266
	Windows Vista 64-bit	8.15.10.2266	15.21.5.64.2266
On-board Audio Realtek High Definition Audio	Windows Vista	6.0.1.6257	PG314
	Windows Vista 64-bit	6.0.1.6257	PG314
Display Audio Intel(R) Display Audio	Windows Vista	6.14.0.3074	15.21.5.2266
	Windows Vista 64-bit	6.14.0.3074	15.21.5.64.2266
LAN Intel 82579LM Gigabit Network Connection	Windows Vista	11.8.78.0	N/A
	Windows Vista 64-bit	11.8.78.0	N/A
USB 3.0 Renesas Electronics USB3.0	Windows Vista	2.0.26.0	N/A
	Windows Vista 64-bit	2.0.26.0	N/A
ME Intel Management Engine Interface	Windows Vista	7.0.0.1144	N/A
	Windows Vista 64-bit	7.0.0.1144	N/A
IRST	Windows Vista	10.0.0.1008	N/A
	Windows Vista 64-bit	10.0.0.1008	N/A

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	9.2.0.1016	9.2.0.1019
	Windows 7 64-bit	9.2.0.1016	9.2.0.1019
On-board GFX Intel(R) HD Graphics Family	Windows 7	8.15.10.2266	15.21.5.2266
	Windows 7 64-bit	8.15.10.2266	15.21.5.64.2266
Audio Realtek High Definition Audio	Windows 7	6.0.1.6257	PG314
	Windows 7 64-bit	6.0.1.6257	PG314
On-board Audio Realtek High Definition Audio	Windows 7	6.14.0.3074	15.21.5.2266
	Windows 7 64-bit	6.14.0.3074	15.21.5.64.2266
LAN Intel 82579LM Gigabit Network Connection	Windows 7	11.8.81.0	N/A
	Windows 7 64-bit	11.8.81.0	N/A
USB 3.0 Renesas Electronics USB3.0	Windows 7	2.0.26.0	N/A
	Windows 7 64-bit	2.0.26.0	N/A
ME Intel Management Engine Interface	Windows 7	7.0.0.1144	N/A
	Windows 7 64-bit	7.0.0.1144	N/A
IRST	Windows 7	10.0.0.1008	N/A
	Windows 7 64-bit	10.0.0.1008	N/A

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	PCI Hardware Compliance Test For Systems	12/31/2011	2051	Erratum	**Issue Description:** PCIHCT - Bit range 11:10 (ASPM Support)in the Link Capabilities register (offset Ch) in the PCI Express Capability table is 0h. It cannot be in the set of values {0x0, 0x2}. (Assertion 5CAF4993-B8D1-4E4E-99EC-CC5895364E32)
Windows Vista Windows Vista-64bit Windows 7 Windows 7 64-bit	PCI Hardware Compliance Test For Systems	6/1/2011	923	Erratum	**Issue Description:** 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	12/1/2012	1241	Erratum	**Issue Description:** 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 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 Vista	PCI Hardware Compliance Test	6/1/2011	401	Erratum	**Issue Description:**

Windows Vista-64bit	For Systems				
Windows 7 Windows 7 64-bit					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	06/01/2011	423	Erratum	**Issue Description:** Assertion 5CAF4993-B8D1-4E4E-99EC-CC5895364E32 Bit range 11:10 (ASPM Support)in the Link Capabilities register (offset Ch) in the PCI Express Capability table is 0h. It cannot be in the set of values {0x0, 0x2}.
Windows 7 Windows 7 64-bit	UAA Test - Win7 (System)	12/31/2011	1670	Erratum	**Issue Description:** 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 Vista Windows Vista-64bit Windows 7 Windows 7 64-bit	**Vista:**UAA Test-Vista or Server08 **WIN7:**UAA Test - Win7 (System)	06/01/2011	1300	Erratum	**Issue Description:** 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	**Vista:**UAA Test-Vista or Server08 **WIN7:**UAA Test - Win7 (System)	07/01/2011	1466	Erratum	**Issue Description:** Preview Filter: UAA Test - Intel Low Power DCN says "EPSS implies KeepAlive, but only after July 1st 2011"
Windows Vista	**Vista:**UAA Test-Vista or Server08	02/28/2011	1299	Erratum	**Issue Description:**

Windows Vista-64bit					
Windows 7 Windows 7 64-bit	**WIN7:**UAA Test - Win7 (System)				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 Windows 7 Windows 7 64-bit	**Vista:**UAA Test- Vista or Server08 **WIN7:**UAA Test - Win7 (System)	06/01/2015	513	Erratum	**Issue Description:** 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	**Vista:**HDAudio Class Driver FidelityTest (System Munual) **Win7:**Class Driver Fidelity	07/31/2011	598	Erratum	**Issue Description:** 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 7 64-bit					
Windows Vista Windows Vista-64bit Windows 7 Windows 7 64-bit	**Vista:**HDAudio Class Driver FidelityTest (System Munual) **Win7:**Class Driver Fidelity Test - Win7(System, Manual)	06/01/2011	1801	Erratum	**Issue Description:** 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 Windows 7 Windows 7 64-bit	**Vista:**HDAudio Class Driver FidelityTest (System Munual) **Win7:**Class Driver AC3 Test - Win7(system)	06/30/2025	1256	Erratum	**Issue Description:** 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	Wave Test - Vista or Server08 (System) HDAudio Class Driver Test -vista or Server08(System)	1/31/2011	1444	Erratum	**Issue Description:**

	HDAudio Class Driver FidelityTest (System Munual)				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 | Wave Test - Vista or Server08 (System) | 06/01/2011 | 142 | Erratum | **Issue Description:**

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 7

Windows 7 64-bit | Graphics HDMI System Test (Manual) | 06/01/2011 | 1717 | Erratum | **Issue Description:**

GraphicsHDMITest: should ignore pin widgets that have "Port Connectivity" set to "No Physical Connection" |
| Windows 7

Windows 7 64-bit | Graphis HDMI System Test (Manual) | 12/31/2011 | 3272 | Filter | **Issue Description:**

HDMI audio codecs sometimes expose more HDMI audio pins (audio outputs) than can be plugged in at any given time, due to resource costraints in the video hardware.

Test will need to be rejiggered to allow testing each in turn. |

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 Trusted Platform Module: Enable Others: BIOS default setting
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