Motherboard Logo Program (MLP)

Intel® Desktop Board DQ45EK

MLP Report

9/25/2009

Purpose:

This report describes the DQ45EK 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 DQ45EK 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)
DQ45EK	CBQ4510H.86A.0093.2009.0724.1353	N/A - all technologies logo'd
Processor		
Speed	3.16GHz	
Family	Intel® Core™2 Duo	
Bus Speed	1333 MHz	
Motherboard		
Board AA #	E30149	
Board FAB #	205	
* 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, DDR2, 800MHz	
Memory Type	DIMM	
Connector Type	DDR2, 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 1
Windows Vista Basic and 64-bit	☐	Vista Basic with Service Pack 1

[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**	9.0.0.1009	9.0.0.1009
	Windows Vista 64-bit	9.0.0.1009	9.0.0.1009
Graphics Intel® Graphics Media Accelerator	**Windows Vista**	7.15.10.1537	15.11.0.1537
	Windows Vista 64-bit	7.15.10.1537	15.11.64.1537
Audio ADI	**Windows Vista**	6.10.1.6520	6520
	Windows Vista 64-bit	6.10.1.6520	6520
LAN Intel® PRO Network Connections	**Windows Vista**	10.3.39.0	13.5
	Windows Vista 64-bit	10.3.39.0	13.5
MEI Intel® Management Engine Interface	**Windows Vista**	5.0.0.1111	5.0.1.1111
	Windows Vista 64-bit	5.0.0.1111	5.0.1.1111
iAMT Intel® Active Management Technology	**Windows Vista**	5.0.0.1111	5.0.1.1111
	Windows Vista 64-bit	5.0.0.1111	5.0.1.1111

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**	9.1.1.1015	9.1.1.1015
	Windows 7 64-bit	9.1.1.1015	9.1.1.1015
Graphics Intel® Graphics Media Accelerator	**Windows 7**	8.15.10.1855	15.15.0.1855
	Windows 7 64-bit	8.15.10.1855	15.15.3.64.1855
Audio ADI	**Windows 7**	6.10.2.6585	6585
	Windows 7 64-bit	6.10.2.6585	6585
LAN Intel® PRO Network Connections	**Windows 7**	11.0.41.0	14.2
	Windows 7 64-bit	11.0.41.0	14.2
MEI Intel® Management Engine Interface	**Windows 7**	5.2.0.1008	5.2.0.1018
	Windows 7 64-bit	5.2.0.1008	5.2.0.1018
iAMT Intel® Active Management Technology	**Windows 7**	5.5.1.1012	5.2.0.1018
	Windows 7 64-bit	5.5.1.1012	5.2.0.1018

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	WLK1.4 for Windows 7	WLK1.4 for Windows 7
Windows Vista Windows Vista 64-bit	WLK1.4 for Windows Vista SP1	WLK1.4 for Windows Vista SP1

Errata and Contingencies

Operating System	Failing Test	Expiry Date	ID Number	Type	Error Description
Windows 7 Windows 7 64-bit	1)Class Driver Fidelity Test - Win7 (System, Manual) 2)Fidelity Test - Win7 (System, Manual)	12/31/2009	1547	Erratum	Fidelity Test now includes a "Render Power Transition" test. This preview filter covers all errors in this new test of SYSFUND-0050.
Windows 7 Windows 7 64-bit	Class Driver Fidelity Test - Win7 (System, Manual)	12/01/2009	1670	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.
Window 7	1)Class Driver Round Trip Test – Win7 (System, Manual) 2)Round Trip Test – Win7 (System, Manual)	11/01/2009	1709	Erratum	Preview Filter: RoundTrip in-air test This test case is in preview mode for WLK 1.4. It will be enforced in November 2009.
Windows 7 Windows 7 64-bit	PCI Hardware Compliance Test For Systems	12/31/2009	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	PCI Hardware Compliance Test For Systems	12/31/2009	1029	Erratum	Assertion B576282C-5C66-4253-A275-257F5D49EFEF SSVID register of the Subsystem ID and Subsystem Vendor ID Capability table cannot have a value of 0h . Assertion 4BA8F23A-6BB1-48EE-88D8-ED1A3ECD34B9 SSVID register of the Subsystem ID and Subsystem Vendor ID Capability table must be read-only . Assertion 6B0F606E-DBB3-4B8C-8879-32B302412EB8 SSID register of the Subsystem ID and Subsystem Vendor ID Capability table must be read-only . Assertion 7A5587BC-5646-4DC4-9A5D-22F85AB2204E PCI Express ports and bridges must implement Subsystem ID and Subsystem Vendor ID Capability.
Windows 7 Windows 7 64-bit	UAA Test - Win7 (System)	12/01/2009	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	UAA Test - Win7 (System)	12/31/2009	1395	Erratum	Certain ADI audio codecs do not correctly implement PinControls. In particular, setting unsupported VRef settings is not zerod out in the register. This requires a hardware change. There is hardware validation, so the unsupported settings are not applied. The unsupported VRefs in question are: 0b011 (Reserved) 0b101 (100%) 0b110 (Reserved) 0b111 (Reserved) This affects the following ADI codecs: • AD1981HD (DEV_1981) • AD1983 (DEV_1983) • AD1984 (DEV_1984) • AD1984A (DEV_194A) • AD1984B (DEV_194B) • AD1986A (DEV_1986) • AD1987 (DEV_1987) • AD1988A (DEV_1988) • AD1988B (DEV_198B) • AD1882 (DEV_1882) • AD1883 (DEV_1883) • AD1884 (DEV_1884) For unsupported VRefs, the pin must either retain the previous value or take the value of 0b000 (Hi-Z). See HD Audio specification section 7.3.3.13.
Windows 7 Windows 7 64-bit	UAA Test - Win7 (System)	12/01/2009	1396	Erratum	Certain ADI audio codecs do not correctly implement PinControls. In particular, unsetting InputEnable and OutputEnable does not allow turning off the audio input or output of a pin. This requires a hardware design fix. The particular failures are: • Turning an input pin off leaves it on • Turning an output pin off leaves it on • Setting an input/output pin to output leaves it as input

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 IDE 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