



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.

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Contents

| | |
|---|----------|
| Introduction | 4 |
| Terms and Definitions..... | 4 |
| Desktop Board Configuration | 5 |
| Desktop Board DQ45EK 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 | 11 |

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.msp |
| 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&q=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 | <input checked="" type="checkbox"/> | Windows 7 Ultimate |
| Windows Vista and 64-bit | <input checked="" type="checkbox"/> | Vista Ultimate with Service Pack 1 |
| Windows Vista Basic and 64-bit | <input type="checkbox"/> | 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 | <p>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.</p> <p>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.</p> <p>In particular, if a headphone jack meets the EU requirement of $X \leq 150$ 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 $X \geq 120$ mV at 32 Ohms, absent knowledge of the output impedance we can only require $X \geq 120$ mV at 300 Ohms.</p> <p>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.</p> <p>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.</p> |
| Window 7 | 1)Class Driver Round Trip Test - Win7 (System, Manual) 2)Round Trip Test - Win7 (System, Manual) | 11/01/2009 | 1709 | Erratum | <p>Preview Filter: RoundTrip in-air test</p> <p>This test case is in preview mode for WLK 1.4. It will be enforced in November 2009.</p> |
| 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 | <p>Assertion B576282C-5C66-4253-A275-257F5D49EFEF SSVID register of the Subsystem ID and Subsystem Vendor ID Capability table cannot have a value of 0h .</p> <p>Assertion 4BA8F23A-6BB1-48EE-88D8-ED1A3ECD34B9 SSVID register of the Subsystem ID and Subsystem Vendor ID Capability table must be read-only .</p> <p>Assertion 6B0F606E-DBB3-4B8C-8879-32B302412EB8 SSID register of the Subsystem ID and Subsystem Vendor ID Capability table must be read-only .</p> <p>Assertion 7A5587BC-5646-4DC4-9A5D-22F85AB2204E PCI Express ports and bridges must implement Subsystem ID and Subsystem Vendor ID Capability.</p> |
| Windows 7 Windows 7 64-bit | UAA Test - Win7 (System) | 12/01/2009 | 1394 | Erratum | <p>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.</p> |
| Windows 7 Windows 7 64-bit | UAA Test - Win7 (System) | 12/31/2009 | 1395 | Erratum | <p>Certain ADI audio codecs do not correctly implement PinControls. In particular, setting unsupported VRef settings is not zeroed out in the register. This requires a hardware change. There is hardware validation, so the unsupported settings are not applied.</p> <p>The unsupported VRefs in question are: 0b011 (Reserved) 0b101 (100%) 0b110 (Reserved) 0b111 (Reserved)</p> <p>This affects the following ADI codecs:</p> <ul style="list-style-type: none"> • 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) <p>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.</p> |
| Windows 7 Windows 7 64-bit | UAA Test - Win7 (System) | 12/01/2009 | 1396 | Erratum | <p>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.</p> <p>This requires a hardware design fix.</p> <p>The particular failures are:</p> <ul style="list-style-type: none"> • 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 |