Motherboard Logo Program (MLP)

# Intel® Desktop Board

# DG45ID

# MLP Report

9/29/2009

**Purpose:**

This report describes the DG45ID 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 DG45ID 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) |
|---|---|---|
| DG45ID | IDG4510H.86A.0101.2009.0526.1006 | N/A - all technologies logo'd |
| **Processor** | | |
| Speed | 3.0GHz | |
| Family | Intel® Core™2 Quad | |
| Bus Speed | 1333 MHz | |
| **Motherboard** | | |
| Board AA # | E27729 | |
| Board FAB # | 307 | |
| * 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**<br>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**<br>Intel® Graphics Media Accelerator | Windows Vista | 7.15.10.1511 | 15.11.3.1511 |
| | Windows Vista 64-bit | 7.15.10.1511 | 15.11.3.64.1511 |
| **Audio**<br>IDT | Windows Vista | 6.10.6087.0 | 6087 v1.30 |
| | Windows Vista 64-bit | 6.10.6087.0 | 6087 v1.30 |
| **LAN**<br>Intel® PRO Network Connections | Windows Vista | 9.52.10.0 | 9.52.10.0 |
| | Windows Vista 64-bit | 9.52.10.0 | 9.52.10.0 |
| **MEI**<br>Intel® Management Engine Interface | Windows Vista | 5.0.1.1055 | 5.0.0.1081 |
| | Windows Vista 64-bit | 5.0.1.1055 | 5.0.0.1081 |
| **CIR**<br>Winbond Consumer Infrared | Windows Vista | 7.0.65.1006 | 7.0.65.1002 |
| | Windows Vista 64-bit | 7.0.65.1006 | 7.0.65.1002 |

## Onboard Integrated Devices and Driver for Windows 7 32-bit and 64-bit

| Technology | OS | Version | Package version |
|---|---|---|---|
| **Chipset Update Utility**<br>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**<br>Intel® Graphics Media Accelerator | Windows 7 | 8.15.10.1808 | 15.15.0.1808 |
| | Windows 7 64-bit | 8.15.10.1808 | 15.15.64.1808 |
| **Audio**<br>IDT | Windows 7 | 6.10.6212.0 | 6212 v169 |
| | Windows 7 64-bit | 6.10.6212.0 | 6212 v169 |
| **LAN**<br>Intel® PRO Network Connections | Windows 7 | 10.0.6.0 | 14.2 |
| | Windows 7 64-bit | 10.0.6.0 | 14.2 |
| **MEI**<br>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 |

# 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<br>Windows 7 64-bit | WLK1.4 for Windows 7 | WLK1.4 for Windows 7 |
| Windows Vista<br>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 |
|---|---|---|---|---|---|
| Window 7<br>Window 7 64-bit | Class Driver AC3 Test – Win7 (System) | 06/01/2010 | 1572 | Erratum | The HD Audio class driver hdaudio.sys exposes AC-3 data ranges on S/PDIF Kernel Streaming pins incorrectly.<br><br>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.<br><br>However, the HD Audio class driver sometimes incorrectly exposes a MaximumBitDepth of 24 or even 32. |
| Windows 7<br>Windows 7 64-bit | 1)Class Driver Fidelity Test - Win7 (System, Manual)<br><br>2)Fidelity Test - Win7 (System, Manual) | 12/01/2009 | 1424 | Erratum | Fidelity plays a quiet (-60 dB FS) test tone during System Activity test which is filtered out of the noise level measurement.<br><br>However, Fidelity is quite prone to glitches during system activity… the glitches leak into the measured noise, causing false failures. |
| Windows 7<br>Windows 7 64-bit | 1)Class Driver Fidelity Test - Win7 (System, Manual)<br><br>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<br>Windows 7 64-bit | Graphic HDMI System Test (Manual) | 06/01/2010 | 1529 | Erratum | AMD/ATI HDMI codecs set the "HDMI Capable" bit of the Pin Capabilities register to 1, but do not respond to ELD verbs. |
| Windows 7<br>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<br>Windows 7 64-bit | PCI Hardware Compliance Test For Systems | 12/31/2009 | 1029 | Erratum | Assertion B576282C-5C66-4253-A275-257F5D49EFEF<br>SSVID register of the Subsystem ID and Subsystem Vendor ID Capability table cannot have a value of 0h .<br><br>Assertion 4BA8F23A-6BB1-48EE-88D8-ED1A3ECD34B9<br>SSVID register of the Subsystem ID and Subsystem Vendor ID Capability table must be read-only .<br><br>Assertion 6B0F606E-DBB3-4B8C-8879-32B302412EB8<br>SSID register of the Subsystem ID and Subsystem Vendor ID Capability table must be read-only .<br><br>Assertion 7A5587BC-5646-4DC4-9A5D-22F85AB2204E<br>PCI Express ports and bridges must implement Subsystem ID and Subsystem Vendor ID Capability. |

| | | | | | |
|---|---|---|---|---|---|
| Windows 7<br>Windows 7 64-bit | UAA Test -<br>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<br>Windows 7 64-bit | UAA Test -<br>Win7 (System) | 06/01/2010 | 1587 | Erratum | 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/<br><br>The codec is expected to perform validation on EPT values set in this fashion. From the DCN:<br><br>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. |
| Windows 7<br>Windows 7 64-bit | UAA Test -<br>Win7 (System) | 06/01/2010 | 1665 | Erratum | 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/<br><br>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. |

# Test Notes

| Operating System | Test | Description |
|---|---|---|
| **Windows 7 and Vista** | BIOS download | Internal: http://bios.intel.com/downloads/ <br> 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. <br><br> System Date and Time: Current date and time <br> Peripheral Configuration: Enable all onboard component (Except CIR) <br> Drive Configuration: Set to IDE <br> Chipset Configuration:  Enable HPET <br> ACPI Suspend State: Set to \<S3 State\> <br> Boot Device Priority: set \<Hard Disk Driver\> to first <br><br> 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 |