



Motherboard Logo Program (MLP)

**Intel® Desktop Board**

**DG41WV**

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**MLP Report**

3/24/2011

**Purpose:**

This report describes the DG41WV 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:<br><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 DG41WV 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)      |
| DG41WV   | WVG4110H.86A.0007.2010.0302.1843    | N/A - all technologies logo'd      |
| <b>Processor</b>   |                                     |                                    |
| Speed  | 3.00 GHz                            |                                    |
| Family   | Intel® Core(TM)2 Quad CPU Q9650     |                                    |
| Bus Speed  | 1333Mhz                             |                                    |
| <b>Motherboard</b>   |                                     |                                    |
| Board AA #   | E90316                              |                                    |
| Board FAB #  | 100                                 |                                    |
| * 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, 1066MHz         |                                    |
| 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 |
|---|----------------------|----------------|-----------------|
| Chipset Update Utility<br>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      |
| Graphics<br>Intel(R) G41 Express chipset                  | Windows Vista        | 8.15.10.2040   | 15.16.7.2040    |
|   | Windows Vista 64-bit | 8.15.10.2040   | 15.16.7.64.2040 |
| Audio<br>Realtek HD Audio                                 | Windows Vista        | 6.0.1.6013     | 6013            |
|   | Windows Vista 64-bit | 6.0.1.6013     | 6013            |
| LAN<br>Realtek PCIe GBE Family Controller                 | Windows Vista        | 6.227.902.2009 | 6.227           |
|   | Windows Vista 64-bit | 6.227.902.2009 | 6.227           |

## 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        | 9.1.1.1025     | 9.1.1.1025      |
|   | Windows 7 64-bit | 9.1.1.1025     | 9.1.1.1025      |
| Graphics<br>Intel(R) G41 Express chipset                  | Windows 7        | 8.15.10.1883   | 15.15.5.1883    |
|   | Windows 7 64-bit | 8.15.10.1883   | 15.15.5.64.1883 |
| Audio<br>Realtek HD Audio                                 | Windows 7        | 6.0.1.6013     | 6013            |
|   | Windows 7 64-bit | 6.0.1.6013     | 6013            |
| LAN<br>Realtek PCIe GBE Family Controller                 | Windows 7        | 7.11.1127.2009 | 7.011           |
|   | Windows 7 64-bit | 7.11.1127.2009 | 7.011           |

## Windows Logo Kits Used (WLK)

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

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<br>Windows Vista 64-bit | <a href="#">WLK1.5 for Windows Vista SP2</a> | <a href="#">WLK1.5 for Windows Vista SP2</a> |
| Windows 7<br>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<br>Windows 7 64-bit<br>Windows Vista<br>Windows Vista 64-bit | 1)Class Drive AC3 Test - Win7 (System)<br><br>2)HDAudio Class Driver Test - Vista or Server08 (System)  | 6/1/2010    | 1256      | 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 Vista<br>Windows Vista 64-bit                                  | 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.  |
| Windows 7<br>Windows 7 64-bit<br>Windows Vista<br>Windows Vista 64-bit | PCI Hardware Compliance Test For Systems  | 12/1/2010   | 423       | Erratum | 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<br>Windows 7 64-bit<br>Windows Vista<br>Windows Vista 64-bit | PCI Hardware Compliance Test For Systems  | 6/1/2010    | 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<br>Windows 7 64-bit<br>Windows Vista<br>Windows Vista 64-bit | 1) Fidelity Test (System, Manual)<br><br>2) HDAudio Class Driver Fidelity Test- Vista (System, Manual)<br><br>3) Class Driver Fidelity Test - Win7 (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<br>Windows 7 64-bit<br>Windows Vista<br>Windows Vista 64-bit | 1) HDAudio Class Driver Fidelity Test- Vista (System, Manual)<br><br>2) Class Driver Fidelity Test - Win7 (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<br>Windows 7 64-bit<br>Windows Vista<br>Windows Vista 64-bit | 1)UAA Test - Win7 (System)<br><br>2)UAA Test - Vista or Server08 (System)   | 6/1/2010    | 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.   |

## 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><br>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.<br><br>System Date and Time: Current date and time<br>Peripheral Configuration: Enable all onboard component<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 |
| 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  |