Motherboard Logo Program (MLP)

Intel® Desktop Board DG43GT

MLP Report

9/28/2009

Purpose:

This report describes the DG43GT Motherboard Logo Program testing run conducted by Intel Corporation.

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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 DG43GT 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)
DG43GT	GTG4310H.86A.0019.2009.0625.1334	N/A - all technologies logo'd
Processor		
Speed	3.0GHz	
Family	Intel® Core™2 Quad	
Bus Speed	1333 MHz	
Motherboard		
Board AA #	E62768	
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, 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**	9.1.1.1014	9.1.1.1014
	Windows Vista 64-bit	9.1.1.1014	9.1.1.1014
Graphics Intel® Graphics Media Accelerator	**Windows Vista**	7.15.10.1829	15.13.4.1829
	Windows Vista 64-bit	7.15.10.1829	15.13.4.64.1829
Audio Realtek	**Windows Vista**	6.0.1.5880	5880
	Windows Vista 64-bit	6.0.1.5880	5880
LAN Intel® PRO Network Connections	**Windows Vista**	9.52.25.0	13.5
	Windows Vista 64-bit	9.52.25.0	13.5
MEI Intel® Management Engine Interface	**Windows Vista**	5.0.1.1055	5.0.1.1055
	Windows Vista 64-bit	5.0.1.1055	5.0.1.1055

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	15.15.1.1808
	Windows 7 64-bit	8.15.10.1855	15.15.1.1808
Audio Realtek	**Windows 7**	6.0.1.5892	5892
	Windows 7 64-bit	6.0.1.5892	5892
LAN Intel® PRO Network Connections	**Windows 7**	10.0.6.0	14.2
	Windows 7 64-bit	10.0.6.0	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

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

Errata and Contingencies

Operating System	Failing Test	Expiry Date	ID Number	Type	Error Description
Windows 7 Windows 7 64-bit	Class Driver AC3 Test – Win 7 (System)	06/01/2010	1256	Erratum	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 7 Windows 7 64-bit	1) Class Driver Fidelity Test - Win7 (System, Manual) 2) Fidelity Test - Win7 (System, Manual)	12/31/2009	1238	Erratum	Fidelity test now enforces SYSFUND-0050 - pop/click supporession is required to avoid noise during power state transitions.
Windows 7 Windows 7 64-bit	Class Driver Fidelity Test - Win7 (System, Manual)	12/1/2009	598	Erratum	The European Union requires the headphone output level to be <= 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 >= 1000 mVrms to >= 120 mVrms. This provides freedom for manufacturers to meet both the EU <= 150 mVrms @ 32 Ohms and the WLP >= 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 >= 120 mVrms at 300 Ohms "could be" a passing result, depending on the output impedance.
Windows 7 Windows 7 64-bit	PCI Hardware Compliance Test For Systems	12/31/2009	401	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	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 Windows 7 64-bit	PCI Hardware Compliance Test For Systems	06/01/2010	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.

Operating System	Failing Test	Expiry Date	ID Number	Type	Error Description
Windows 7 Windows 7 64-bit	UAA Test - Win7 (System)	12/01/2009	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.
Windows 7 Windows 7 64-bit	UAA Test - Win7 (System)	06/01/2010	1288	Erratum	Error: attempted to set unsupported EPT 0b10 (Reserved); previous value was 0b01 (Reserved); response was 0b10 (Reserved) For unsupported EPTs, the pin must either retain the previous value or take the value of 0b00 (Native). See HD Audio specification section 7.3.3.13.
Windows 7 Windows 7 64-bit	UAA Test - Win7 (System)	06/01/2011	1299	Erratum	The original HD Audio 1.0 specification contains a notion of "presence detect", using electrical impedance which was intended to apply only to analog pins. However, the language of the specification was such that it could be read to apply to digital pins as well - in particular, to S/PDIF pins. A DCN was released to extend the notion of presence detect to digital pins - in particular, to HDMI pins. This repurposed one of the impedance bits, which were thought to be unused in digital pins, to mean "ELD valid." The correct way for a S/PDIF pin to respond to a Pin Sense verb is to set the highest bit (Presence Detect) to 1 or 0 corresponding to whether a S/PDIF connection is active; set the ELD Valid bit to 0 (since there is no such thing as ELD for S/PDIF); and set the rest of the bits, which are reserved for digital pins, to 0. This errata filter is a preview filter to allow hardware manufacturers time to update any hardware that used the impedance bits on digital pins.
Windows 7 Windows 7 64-bit	UAA Test - Win7 (System)	06/01/2010	1348	Erratum	Preview Filter - ASP Channel Mapping 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/ 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.
Windows 7 Windows 7 64-bit	Wave Test - Win7 (System)	06/01/2010	1281	Erratum	Run "Data Intersection Test\Capture Streaming\Check Supported Formats" out of WaveTest on a system containing audio devices that are "disabled" via the Sound Control panel. Expected results: should succeed. Actual results: fail with "Failed to find any endpoints for the current pin" and "Failed to decide if current data intersection test should be skipped"
Windows 7 Windows 7 64-bit	Graphics HDMI System Test (Manual)	06/01/2010	1234	Erratum	HDMITest: codecs failed for setting HDMI Capable bit = 1 but not implementing ELD verb

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