



Motherboard Logo Program (MLP)

Intel® Desktop Board

DZ77BH

---

MLP Report

2/22/2012

**Purpose:**

This report describes the Board DZ77BH Motherboard Logo Program testing run conducted by Intel Corporation.

THIS TEST REPORT IS PROVIDED "AS IS" WITH NO WARRANTIES WHATSOEVER, INCLUDING ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY WARRANTY OTHERWISE ARISING OUT OF ANY PROPOSAL, SPECIFICATION OR SAMPLE.

Information in this document is provided in connection with Intel products. No license, express or implied, by estoppels or otherwise, to any intellectual property rights is granted by this document or by the sale of Intel products. Except as provided in Intel's Terms and Conditions of Sale for such products, Intel assumes no liability whatsoever, and Intel disclaims any express or implied warranty, relating to sale and/or use of Intel products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright or other intellectual property right. Intel products are not intended for use in medical, life saving, or life sustaining applications.

Intel retains the right to make changes to its test specifications at any time, without notice.

The hardware vendor remains solely responsible for the design, sale and functionality of its product, including any liability arising from product infringement or product warranty.

Intel® Core™ i7 and Intel® are trademarks of Intel Corporation in the U.S. and other countries.

\*Other names and brands may be claimed as the property of others

Copyright © 2009, Intel Corporation. All rights reserved.

# Contents

---

<b>Introduction</b> .....	<b>4</b>
Terms and Definitions.....	4
<b>Desktop Board Configuration</b> .....	<b>5</b>
Desktop Board DZ77BH Configuration Report: Completion of MLP .....	5
Board Information.....	5
Onboard Integrated/Add-in Devices and Driver for Windows 7 32-bit and 64-bit.....	6
Windows Logo Kits Used (WLK) .....	7
Errata and Contingencies .....	8
Test Notes .....	10

# Introduction

---

## Terms and Definitions

Term	Definitions
WHQL	Windows* Hardware Qualification Lab
WLK	Windows Logo Kits
MLP	Motherboard Logo Program. For further information see: <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

---

## Desktop Board DZ77BH 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)
DZ77BH	BHZ7710H.86A.0057.2012.0208.1904	N/A - all technologies logo'd
<b>Processor</b>		
Speed	3.4GHz	
Family	Intel® Core i7 3770 QC44	
Bus Speed	1333 MHz	
<b>Motherboard</b>		
Board AA #	G39008	
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.		
<b>System Memory</b>		
Speed	Dual Channel, DDR3, 1600MHz	
Memory Type	DIMM	
Connector Type	DDR3, 240 Pin	
<b>Power Management</b>		
BIOS Default	S3	
<b>Operating System Tested</b>		
	Check Tested	Comments
Windows 7 32 and 64-bit	<input checked="" type="checkbox"/>	Windows 7 Ultimate with Service Pack 1

---

<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/Add-in 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	9.3.0.1020	9.3.0.1020
	Windows 7 64-bit	9.3.0.1020	9.3.0.1020
On-board Graphic Intel HD Graphic 4000	Windows 7	8.15.10.2618	15.26.0.2618
	Windows 7 64-bit	8.15.10.2618	15.26.64.618
On-board Audio Realtek High Definition Audio	Windows 7	6.0.1.6526	PG344
	Windows 7 64-bit	6.0.1.6526	PG344
LAN Intel 82579V Gigabit Network Connection	Windows 7	11.15.12.0	16.8
	Windows 7 64-bit	11.15.12.0	16.8
ME Intel Management Engine Interface	Windows 7	8.0.0.1262	8.0.0.1262
	Windows 7 64-bit	8.0.0.1262	8.0.0.1262
USB 3.0 Intel USB3.0	Windows 7	1.0.3.214	1.0.3.214
	Windows 7 64-bit	1.0.3.214	1.0.3.214
USB 3.0 NEC	Windows 7	2.1.28.0	2.1.28.0
	Windows 7 64-bit	2.1.28.0	2.1.28.0
CIR Nuvoton W836x7HG	Windows 7	2.2.2011.128	2.2.2011.128
	Windows 7 64-bit	2.2.2011.128	2.2.2011.128
IRST Intel Z77	Windows 7	11.0.0.1032	11.0.0.1032
	Windows 7 64-bit	11.0.0.1032	11.0.0.1032
Marvell SATA	Windows 7	1.2.0.1019	1.2.0.1019
	Windows 7 64-bit	1.2.0.1019	1.2.0.1019

## 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 7 Windows 7 64-bit	<a href="#">WLK1.6 for Windows 7 SP1</a>	<a href="#">WLK1.6 for Windows 7 SP1</a>

## Errata and Contingencies

Operating System	Failing Test	Expiry Date	ID Number	Type	Error Description
windows 7 windows 7 - 64bit	PCI Hardware Compliance Test For Systems	12/01/2012	401	Erratum	<b>Issue Description:</b> 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 - 64bit	PCI Hardware Compliance Test For Systems	12/01/2012	1241	Erratum	<b>Issue Description:</b> Data Link Layer Link Active Reporting Capable bit is set but Data Link Layer Link Active is not.
windows 7 windows 7 - 64bit	PCI Hardware Compliance Test For Systems	12/01/2012	923	Erratum	<b>Issue Description:</b> Bit range 15:0 (Extended Capability ID) in the Enhanced Capability Header register (offset 0h) in the Unrecognized Enhanced Capability ID 13 table is Dh. It must be in the range [0x0 - 0xB] as all other Capability IDs are reserved.
windows 7 windows 7 - 64bit	UAA Test - Win7 (System)	06/01/2015	513	Erratum	<b>Issue Description:</b> 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 - 64bit	UAA Test - Win7 (System)	06/01/2015	1300	Erratum	<b>Issue Description:</b> HD Audio pin configuration document calls out setting Port Connectivity to No Connection as the way to turn a pin off in a particular system. UAA Test incorrectly tests such pins.
windows 7 windows 7 - 64bit	UAA Test - Win7 (System)	06/01/2013	Filter 3276	Erratum	<b>Issue Description:</b> HDMI audio devices are backed by video pipes; if a graphics subsystem exposes three output ports, but only has two video pipes, it is not possible to get all three HDMI audio endpoints "active" simultaneously.



windows 7	UAA Test - Win7 (System)	03/31/2012	Filter 4119	Contingencies	<b>Issue Description:</b> Specific codecs do not correctly support Input Enable and Output Enable pin widget controls. This results in an attempt to shut off the pin, and it doesn't shut off. The Microsoft audio class driver has other ways of making sure the pins don't make sound, which happen to work for these specific codecs.
windows 7 - 64bit	Class Driver AC3 Test - Win7 (System)	06/30/2025	1256	Erratum	<b>Issue Description:</b> 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 - 64bit	Class Drive Fidelity Test - Win7 (System, Manual)	7/31/2015	598	Erratum	<b>Issue Description:</b> 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 windows 7 - 64bit	Class Drive Fidelity Test - Win7 (System, Manual)	6/01/2015	1012	Erratum	<b>Issue Description:</b> Fidelity uses too small of a buffer and wakes up too infrequently during the System Activity test. This causes errors like: Noise level during system activity on (left or right) channel 73.2016 dB: *** FAIL *** (requirement $\geq 80$ dB)
Windows 7 Windows7 - 64bit	Signed Driver Check (Manual)	12/01/2012	2346	Erratum	<b>Issue Description:</b> The Signed Driver Check test may improperly fail with messages related to the subsystem vendor ID of the integrated device. This test assertion check for subsystem vendor IDs is being removed from the next version of the test so we are no longer requiring these test assertions to pass. This does not affect other checks within the test and errors such as oemx.inf is not signed are required to be fixed and pass.
Windows 7 Windows7 - 64bit	USB Host Controller Compliance (Automated)	12/01/2012	1787	Erratum	<b>Issue Description:</b> Errata 1787 This Preview Test is being filtered until the expiration date of this Errata. After the expiration date of this filter these failures must be fixed to have a passing submission. Microsoft strongly recommends that these errors be investigated prior to this test or job being required for submission. XHCI spec compliance test is in preview

## Test Notes

Operating System	Test	Description
Windows 7	BIOS download	Internal: <a href="http://bios.intel.com/downloads/">http://bios.intel.com/downloads/</a> External: <a href="http://www.intel.com/">http://www.intel.com/</a> click on Support and Download
Windows 7	BIOS setup	Please make sure the BIOS setting are as below, otherwise use default settings.  System Date and Time: Current date and time Enhance Consumer IR: Enable Others: BIOS default setting
Windows 7 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