



Windows Hardware Certification (WHC)

Intel® Desktop Board

DH87RL

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# Desktop/Motherboard WHC Report

8/15/2013

**Purpose:**

This report describes the Windows Hardware Certification 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
WHCK	Windows Hardware Certification kit
PLMP	Previously Logo'd Motherboard 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

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## Desktop Board DH87RL Final Configuration Report: Completion of WHC

Data in this section reflects system configuration at time of WHC submission.

### Board Information

Product Code <sup>1</sup>	BIOS String/Model	Technologies NOT Logo'd (yet)
DH87RL	RLH8710H.86A.0314.2013.0410.1954	N/A - all technologies logo'd
<b>Processor</b>		
Speed	3.50 GHz	
Family	Intel® Core™ I7-4770K	
Bus Speed	35x	
<b>Motherboard</b>		
Board AA #	G74240	
Board FAB #	301	
* 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 Channels, DDR3, 1600MHz	
Memory Type	DIMM	
Connector Type	DDR3,240pin	
<b>Power Management</b>		
BIOS Default	S3	
<b>Operating System Tested</b>		
	<b>Check Tested</b>	<b>Comments</b>
Windows 7 32bit and 64bit	<input checked="" type="checkbox"/>	Windows 7 ultimate
Windows 8 64bit	<input checked="" type="checkbox"/>	Windows 8 enterprise

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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 Windows 7 32&64-bit & Windows 8 64-bit

Technology	OS	Version	Package version
<b>Chipset Update Utility</b> Intel® Chipset Software Utility	Windows 7 32-bit	9.4.0.1017	9.4.0.1017
	Windows 7/8 64-bit		
<b>Graphics</b> Intel® HD Graphic 4600	Windows 7 32-bit	9.18.10.3071	15.31.3.3071
	Windows 7/8 64-bit		15.31.3.64.3071
<b>Intel Display Audio</b> Intel® Display Audio	Windows 7 32-bit	6.16.0.3106	15.31.3.3071
	Windows 7/8 64-bit		15.31.3.64.3071
<b>Audio</b> Realtek High HD Audio	Windows 7 32-bit	6.0.1.6844	6.0.1.6844
	Windows 7/8 64-bit		
<b>LAN</b> Intel® I217V (Clarkville)	Windows 7 32-bit	12.6.47.0	12.6.47.0
	Windows 7/8 64-bit		
<b>IRST</b> Intel® Rapid Storage Technology	Windows 7 32-bit	12.0.0.1082	12.0.0.1083
	Windows 7/8 64-bit		
<b>Rapidstart</b> Intel Rapidstart	Windows 7 32-bit	3.0.0.1031	3.0.0.1031
	Windows 7/8 64-bit		
<b>Smart Connect</b> Intel Smart Connect	Windows 7 32-bit	1.0.8.0	4.1.40.2143
	Windows 7/8 64-bit		
<b>CIR</b> Nuvoton	Windows 7 32-bit	2.1.2012.2012	2.1.2012.2012
	Windows 7/8 64-bit		
<b>USB3.0</b> Intel xHCI	Windows 7 32-bit/64bit	2.0.0.100	2.0.0.100
	Windows 8 64-bit	Inbox driver	N/A
<b>MEI</b> Intel® Management Engine Interface	Windows 7 32-bit	9.0.0.1287	9.0.2.1333
	Windows 7/8 64-bit		

## Windows Hardware Certification Certification Kit (WHCK) Used (formerly WLK)

Microsoft website:

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

WHCK: <http://msdn.microsoft.com/id-ID/windows/hardware/hh852359>

Please check regularly for test kit updates from Microsoft. Please ensure latest filters updated prior to WHQL run.

Operating Systems	Notes	WHQL Test kit
Window 7 32bit & 64bit	WHCK 2.0 for Windows 7	WHCK 2.0 for Windows 7
Windows 8 64-bit	WHCK 2.0 for Windows 8	WHCK 2.0 for Windows 8

## Errata and Contingencies

Operating System	Failing Test	Expiry Date	ID Number	Type	Error Description
Windows 7 64-bit Windows 7 32bit	Lullaby Test - Win7(system)	06/01/2013	336	Errata	Lullaby tests expects the KS Pin it holds on to before a sleep/hibernate is still valid after resume. This is valid for most cases with physically connected devices. But with certain Bluetooth hardware and software implementation, this assumption might not be valid, specifically when such an instance such as a USB radio appears unplugged or a design of the driver causes the driver to be unloaded when the remote device disconnects. .
Windows 8 64-bit	Signed Driver Check (CheckLogo)	10/01/2013	361	Errata	Signed Driver Check (CheckLogo) will fail on Button.sys. This binary is installed with the Hardware Certification Kit (HCK) and can have signatures that can't be validated with the Driver Certification Pre-validation assessment.
Windows 8 64-bit	Signed Driver Check (CheckLogo)	09/30/2013	1490	Errata	The Signed Driver Check test may fail incorrectly if a file is signed by multiple .cat files, where one is not signed for the current OS. The test logs will show the wrong .cat file being used to validate the file, while other files in the device package are validated using the correct .cat file. If you encounter this issue, please add the correct .cat file to a 'Supplemental Folder' in your .hckx submission package, and use Manual Errata ID 1490 to cover the failure.
Windows 8 64-bit	Single Computer Display Object test	08/01/2013	884	Errata	AllInOne desktop computers have the "Computer.AllInOne" form factor. For this form factor, the test should recognize the mouse and keyboard to be external to the main computer machine. Without this filter it expects the mouse/keyboard to be part of the computer which may not be the case. t.
Windows7 64-bit Windows 8 64-bit	UAA Test (System)	10/01/2013	235	Errata	UAA test was modified to turn warnings into errors for reserved bits being non-zero. This is a preview filter to allow IHVs to fix the issue.
Window7 32-bit Window 7 64-bit Windows 8 64-bit	UAA Test (System)	10/1/2013	244	Errata	Section 3.3.14 of the Intel High Definition Audio specification mandates a reset value of 0 for the Interrupt Control register on HD Audio controllers.
Window7 32-bit Window 7 64-bit Windows 8 64-bit	UAA Test (System)	7/1/2014	354	Contingency	The FIFO size for Input and Output Stream Descriptors should be read only.
Window7 32-bit Window 7 64-bit Windows 8 64-bit	UAA Test (System)	3/31/2014	1039	Errata	The FIFO size for Input and Output Stream Descriptors should be read only.
Window 8 64-bit	USB Exposed Port System Test	09/30/2013	1435	Auto Triage	The USB Exposed Port Controller Test is known to fail without logs in certain configurations using the xHCI Controller on this system. Please right-click the failed task to review the Error information. If the task failed with ExitCode c0000374, a manual erratum might apply. Before using the manual erratum, it is necessary to review the PortMappingFinder.wtl log for the Port Mapping Tool task. If the log contains any 'No companion port for SuperSpeed port' errors, please contact the xHCI Controller vendor for a firmware update and do not attempt to use the manual erratum. If there are no errors, but there is a 'Couldn't get connector properties for hub' message, please use Manual Errata 1435 in a Readme form. The erratum will only be honored if this AutoTriage filter applies to the Run Test task.



Window 8 64-bit	USB3 Termination	10/01/2013	1407	Errata	The USB3 Termination test may fail to find the USB 3.0 (Super Speed) device if the system's USB ports are not numbered contiguously. While nearly all systems have contiguous USB port numbers, it is not technically required. If this filter allows the FindUsb3Device task to pass, then HCK Errata ID 1407 can be used in a Readme form to overturn the remaining cancelled tasks.
Windows 8 64-bit	xHCI Debug Capability Compliance (Logo)	07/31/2014	316	Contingency	The XHCI Debug Capability Compliance Test will fail XHCI controllers that do not provide the debug capability registers.

## Test Notes

Operating System	Test	Description
Windows 7/8	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 7/8	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 Drive Configuration: Set to AHCI Boot Device Priority: set <Hard Disk Driver> to first Enhance Consumer IR: Enable Intel Rapidstart: Enable Intel Smart Connect: Enable TPM: Enable UEFI Boot: Enabled
Windows 7/8 filter update	WHCK WHQL test	<a href="https://sysdev.microsoft.com/member/SubmissionWizard/LegalExemptions/HCKFilterUpdates.cab">https://sysdev.microsoft.com/member/SubmissionWizard/LegalExemptions/HCKFilterUpdates.cab</a>
Special H/W that use to PASS the test	None	None