



Motherboard Logo Program (MLP)

Intel® Desktop Board

D510MO

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MLP Report

11/19/2009

**Purpose:**

This report describes the D510MO 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: <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 D510M0 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)
D510M0	MOPNV10J.86A.0114.2009.1004.2105	N/A - all technologies logo'd
<b>Processor</b>		
Speed	1.66GHz	
Family	Intel(R) Atom™ D510	
Bus Speed	667MHz	
<b>Motherboard</b>		
Board AA #	E67982	
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	Single Channel, DDR2, 800MHz	
Memory Type	DIMM	
Connector Type	DDR2, 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 Intel® Chipset Software Utility	Windows Vista	9.1.1.1013	9.1.1.1015
	Windows Vista 64-bit	9.1.1.1013	9.1.1.1015
Graphics Intel® Graphics Media Accelerator	Windows Vista	7.14.10.1910	15.12.50.1910
	Windows Vista 64-bit	7.14.10.1910	15.12.50.64.1910
Audio Realtek	Windows Vista	6.0.1.5939	5939
	Windows Vista 64-bit	6.0.1.5939	5939
LAN Realtek	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 Intel® Chipset Software Utility	Windows 7	9.1.1.1013	9.1.1.1015
	Windows 7 64-bit	9.1.1.1013	9.1.1.1015
GFX Realtek	Windows 7	8.14.10.1929	15.12.75.50.1929
	Windows 7 64-bit	8.14.10.1929	15.12.75.50.64.1929
Audio Realtek	Windows 7	6.0.1.5939	5939
	Windows 7 64-bit	6.0.1.5939	5939
LAN Realtek	Windows Vista	7.6.820.2009	7.006
	Windows Vista 64-bit	7.6.820.2009	7.006

## 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 Windows Vista 64-bit	<a href="#">WLK1.4 for Windows Vista SP2</a>	<a href="#">WLK1.4 for Windows Vista SP2</a>
Windows 7 Windows 7 64-bit	<a href="#">WLK1.4 for Windows 7</a>	<a href="#">WLK1.4 for Windows 7</a>

## Errata and Contingencies

Operating System	Failing Test	Expiry Date	ID Number	Type	Error Description
Windows 7 Windows 7 64-bit Windows Vista Windows Vista 64-bit	PCI Hardware Compliance Test For System	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 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 Windows 7 64-bit Windows Vista Windows Vista 64-bit	HDAudio Class Driver Fidelity Test - Vista (System, Manual)	12/1/2009	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 Vista Windows Vista 64-bit	1) Fidelity Test - Vista (System, Manual)  2) HDAudio Class Driver Fidelity Test - Vista (System, Manual)	12/1/2009	966	Erratum	Fidelity Test includes a "System Activity Test" that verifies audio fidelity is not compromised during system activity. It uses an activity generator called rws.exe (Real World Stress) which has a bug that causes it to hit an access violation. When this happens it exits with return code 0xC00000005, or -1073741819.
Windows 7 Windows 7 64-bit Windows Vista Windows Vista 64-bit	Fidelity Test - Vista (System, Manual)	12/31/2009	1238	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 Windows 7 64-bit Windows Vista Windows Vista 64-bit	HDAudio Class Driver Test - Vista or Server08 (System)	6/1/2010	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 Windows Vista Windows Vista 64-bit	UAA Test - Vista or Server08 (System)	12/1/2009	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 Windows Vista Windows Vista 64-bit	Wave Test - Vista or Server08 (System)	6/1/2010	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"

Operating System	Failing Test	Expiry Date	ID Number	Type	Error Description
Windows Vista Windows Vista 64-bit	Wave Test - Vista or Server08 (System)	6/1/2010	1297	Erratum	WaveTest can't find endpoint on Vista driver.
Windows 7 Windows 7 64-bit	Windows Client System Check For WDDM 1.1 Display Driver Support	12/31/2009	1262	Erratum	The Windows Client System Check for WDDM 1.1 Display Driver Support test will be a preview test until December 9, 2009. At which time the requirement for Graphic drivers to be WDDM1.1 version will be enforced. The test is in both the Device program (Display Adapter and Chipset) and the System kit for Windows 7 logo programs.

## Test Notes

Operating System	Test	Description
<b>Windows 7 and Vista</b>	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
<b>Windows 7 and Vista</b>	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 IDE Chipset Configuration: Enable HPET ACPI Suspend State: Set to <S3 State> Boot Device Priority: set <Hard Disk Driver> to first
<b>Windows 7 and Vista filter update</b>	WLK WHQL test	<a href="http://winqual.microsoft.com/member/SubmissionWizard/LegalExemptions/filterupdates.cab">http://winqual.microsoft.com/member/SubmissionWizard/LegalExemptions/filterupdates.cab</a>
<b>Special H/W that use to PASS the test</b>	None	None