

96SD3-8G1600NN-AT Test Report

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Revision History:

Revision Date	Revision	Description	Creator
2011/08/17	1.0	First version released	Jier.liu



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Test Result Definition:

Item	Description
Pass	Compatibility test properly without any problem.
Fail	Compatibility test can't work properly and can't meet the product spec, please describe issue to the "Remark" item detailedly.
No test	No test (no test tool or device or driver not ready), please write reason to the "Remark" item.
N/A	Spec not support.
Limitation	Compatibility issue Limitation, it needs formal approval mail or other formal reply from PM or Applicant or Manufacturer.



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Test Item List Summary

Motherboard or CPU card compatibility test result

MB/SBC	Core Chipset	Result	Remark
AIMB-272	Intel QM67	Pass	
UN0-2184	Intel QM67	Pass	



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1. Product Information:

Advantech Part Number	96SD3-8G1600NN-AT
Manufacturer	ATP
Module Part NO.	AW24M64F8BLK0S
PCB Part NO.	SW204F08M2
IC Brand(chip model)	SEC 140 HYK0 K4B4G0846B
Memory Category	DDR3 SODIMM
Socket type	204PIN
Size	8GB
ECC®	NO ECC®
Bandwidth	12.8GB/sec
Speed Grade	1600Mbps
Max Frequency	800MHz
CAS Latency	CL11
Organization	1024M x 64
Component Composition	512Mx8*16EA
Number of Rank	2
Power supply(VDD)	$1.5V \pm 0.075V$
Operating Temperature	$TC = 0^{\circ} C \text{ to } +95^{\circ} C$
Dimension (W x H x D)	67.6x30x3.8(mm)
RoHS Status (Yes/No)	YES



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Photo:





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2. Test Platform

MB/SBC	AIMB-272		
PCB version	A101-3	CPU	Intel Core i5-2510E 2.50GHZ
BIOS version	A272x014	DRAM	ATP DDR3 SODIMM 1600 8GB
Core Chipset	Intel QM67	Backplane	
VGA Chipset	CPU integrated	Other	
			•
MB/SBC	UNO-2184		
MB/SBC PCB version	UNO-2184 A101-1	CPU	Intel CPU i7-2715QE 2.10GHz
		CPU DRAM	Intel CPU i7-2715QE 2.10GHz ATP DDR3 SODIMM 1600 8GB
PCB version	A101-1		

3. Test Software

Utilities	Version / Description
Power On/Off (For Reliability test)	
Passmark BurnIn Test Pro (For Reliability test)	V7.0 build 1005
MemTest86+ (For Function test)	V4.20
Sisoftware Sandra2011.SP4C(for Performance test)	V17.77
PCMark05(for Performance test)	V1.20

4. Test Item

4.1 Function test

4.1.1 Socket combination and Power on/off test

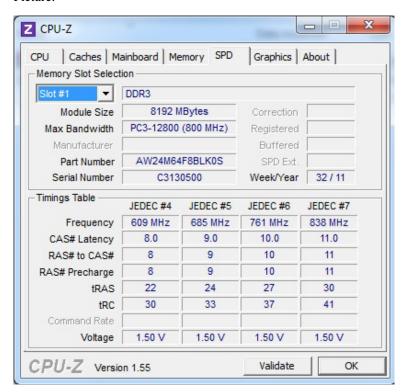
Pass Criteria: Power on/off 10 times, successful boot rate 100% when memory in defferent socket combination as below,then record memory size and frequency information on the boot screen display.

MB/SBC	CPU	Socket	Remark	Result
	Intel Core	DIMM 1	Size:8192,less than actual size 0M.	Pass
	i5-2510E	DIMM 2	Size:8192,less than actual size 0M.	Pass
	2.50GHZ	FULL	Size:16384,less than actual size 0M.	Pass
	Intel CPU	DIMM 1	Frequency:1600,Size:8192,less than actual size 0M.	Pass
UNO-2184	i7-2715QE	DIMM 2	Frequency:1600,Size:8192,less than actual size 0M.	Pass
	2.10GHz	FULL	Frequency:1600,Size:16384,less than actual size 0M.	Pass

4.1.2 Cpu-Z

Pass Criteria: CPU-Z for SPD detect the correct Memory information.

Picture:



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4.1.3 MemTest86+ test

Pass Criteria: MemTest86+ V4.20 should show the correct Memory size and Run 3 Cycles No error.

(note: Memory must be full loading)

MB/SBC	CPU	Remark	Result
AIMB-272	Intel Core i5-2510E 2.50GHZ	Size:16384MB.	Pass
UNO-2184	Intel CPU i7-2715QE 2.10GHz	Speed:1600;Size:16384MB.	Pass

4.1.4 OS installation

Pass Criteria: Windows OS can be installed and boot into OS properly.

MB&SBC: AIMB-272

os	Version	Result
Windows 7	Windows 7 Ultimate 32bit	Pass
Windows XP	Windows XP professional edition 64bit with SP2	Pass

4.2 Performance test

4.2.1 Sisoftware Sandra

Pass Criteria: Run software "Sisoftware Sandra 2010", Recording the benchmark score and compare the score with other product. The Memory performance can reach the average value.

(note: The CPU must be Select Max core with Max FSB.)

	:				
MB/SBC	Memory Bandwidth-Int Buff'd (GB/s)	Memory Bandwidth Float Buff'd (GB/s)	Memory (Random Access) Latency (ns)	Memory Latency-Speed Factor	Result
AIMB-272	17.67	17.61	88.9	64.8	Pass
UNO-2184	20.27	20.22	88.9	50.6	Pass



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4.2.2 PCMark05

Pass Criteria: Run software "PCMark05 V1.20", Recording the benchmark score and compare the score with other product. The Memory performance can reach the average value.

(note: The CPU must be Select Max core with Max FSB.)

MB/SBC	PCMark05 V1.20						
	Memory score	Item	Memory read (MB/S)	Memory write (MB/S)	Memory copy (MB/S)	Memory latency-Random (Maccesses/s)	Result
AIMB-272	9180	16MB	13661.745	15010.681	12776.694	13.469	- Pass
		8MB	14701.363	14965.559	12532.993	13.084	
		192KB	40008.066	26645.949	23525.908	260.678	
		4KB	58208.711	37741.844	36948.816	773.716	
UNO-2184	8898	16MB	14896.771	14024.66	12308.178	13.739	Pass
		8MB	17147.508	14005.593	12598.986	15.387	
		192KB	37863.707	25037.24	20838.617	252.659	
		4KB	51613.777	31867.641	31403.891	748.680	

4.3 Reliability test

4.3.1 Room temperature

MB/SBC:UNO-2184

OS: Windows 7 Ultimate 32bit

(Note: The CPU must be Select Max core with Max FSB, and Memory Full Loading.)

Item	Pass Criteria	Result
Power on/off	Power on/off 100 times, successful boot rate 100%;	Pass
Burn_inV6.0	Set CPU/2D/3D/Memory loading 100%; The result should be passed	Pass
	when running Burn_in V6.0 for 12 hours.	rass

4.3.2 High/Low temperature

MB/SBC:AIMB-272

OS: Windows XP professional edition 64bit with SP2

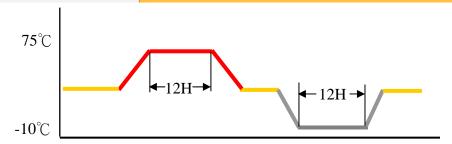
Test Environment: -10°C~75°C



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(Note: The CPU must be Select Max core with Max FSB, and Memory Full Loading.)

Item	Pass Criteria	Result
Power on/off	Power on/off 100 times, successful boot rate 100%;	Pass
Burn_inV6.0	Set CPU/2D/3D/Memory loading 100%; The result should be passed	Pass
	when running Burn_in V6.0 for 12 hours.	rass

5. Appendix