

96D3-8G1600NN-TR

Test Report

Test Requestor	Catherine.Chang	Job Title		Release Date	2012-4-16
Testing Engineer	Tenthy.Zhang	Job Title	AKDC DQA Engineer	Revision	V1.0
Approved by	Sophie.Song	Job Title	AKDC DQA assistant manager	Release Status	Formal Release

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.

Test Item List Summary

Motherboard or CPU card compatibility test result

MB/SBC	Core Chipset	Result	Remark
FWA-3210	Intel C206	Pass	Chipset Limitation, down to Frequency1333
FWA-4208	Intel 3420 PCH	Pass	Chipset Limitation, down to Frequency1333
ASMB-781	Intel C206	Pass	Chipset Limitation, down to Frequency1333
PCE-5126WG2	Intel C206	Pass	Chipset Limitation, down to Frequency1333

1. Product Information:

Advantech Part Number	96D3-8G1600NN-TR
Manufacturer	Transcend
Module Part NO.	TS1GLK64V6H
Transcend DB P/N	TS9KNH28300-6M
PCB Part NO.	09-2830
IC Brand(chip model)	Micron 1WD27 D9PBC
Memory Category	DDR3
Socket type	240Pin
Size	8GB
ECC&REG	ECC
Bandwidth	12.8GB/sec
Speed Grade	1600Mbps
Max Frequency	800MHz
CAS Latency	CL9
Organization	1G x 64bits
Component Composition	512Mx8*16
Number of Rank	2
Power supply(VDD)	1.5V ± 0.075V
Operating Temperature	0 to 85°C
Dimension (W x H x D)	133.35x30x1.27
RoHS Status (Yes/No)	Yes

Photo:



2. Test Platform


MB/SBC	FWA-3210		
PCB version	A101-1	CPU	Intel® Core™ i7-2600 3.40 GHz
BIOS version	3210X006	DRAM	Transcend DDR3 1600 8GBx4 DIMM
Core Chipset	Intel C206	Backplane	NA
VGA Chipset	CPU integrated VGA Controller	Other	

MB/SBC	FWA-4208		
PCB version	A103-1	CPU	Intel Xeon Processor X3430 2.40GHz
BIOS version	4208V110	DRAM	Transcend DDR3 1600 8GBx4 DIMM
Core Chipset	Intel 3420 PCH	Backplane	NA
VGA Chipset	NVIDIA GT210	Other	

MB/SBC	ASMB-781		
PCB version	A101-3	CPU	Intel® Core™ i5-2400 3.10 GHz
BIOS version	S781X014	DRAM	Transcend DDR3 1600 8GBx4 DIMM
Core Chipset	Intel C206	Backplane	NA
VGA Chipset	Onboard VGA AST2300	Other	

MB/SBC	PCE-5126WG2		
PCB version	A101-3	CPU	Intel Xeon E31275 3.40GHz
BIOS version	5126X018	DRAM	Transcend DDR3 1600 8GBx4 DIMM
Core Chipset	Intel C206	Backplane	NA
VGA Chipset	CPU integrated VGA Controller	Other	

3. Test Software

Utilities	Version / Description
Power On/Off (For Reliability test)	
Passmark BurnIn Test Pro (For Reliability test)	V7.0 build 1005
EVEREST Ultimate Edition	V5.0
MemTest86+ (For Function test)	V4.20
Sisoft Sandra2010.SP3(for Performance test)	V16.67
PCMark05(for Performance test)	V1.20

4. Test Item

4.1 Function test

4.1.1 Socket combination and Power on/off test

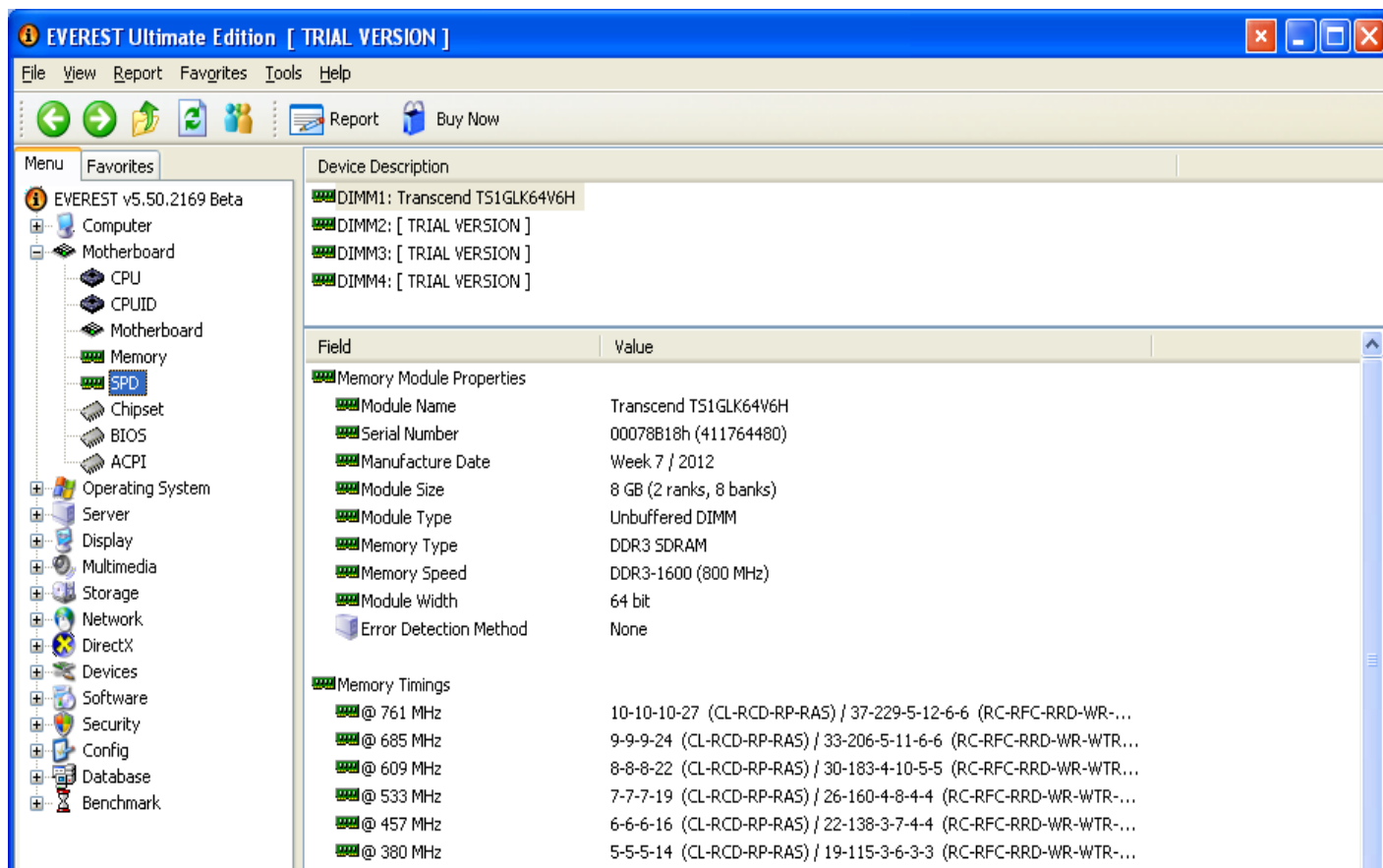
Pass Criteria: Power on/off 10 times, successful boot rate 100% when memory in different socket combination as below, then record memory size and frequency information on the boot screen display.

MB/SBC	CPU	Socket	Remark	Result
FWA-3210	Intel® Core™ i7-2600 3.40 GHz	DIMM A1	Down to Frequency1333, Size: 8192MB	Pass
		DIMM A2	Down to Frequency1333, Size: 8192MB	Pass
		DIMM B1	Down to Frequency1333, Size: 8192MB	Pass
		DIMM B2	Down to Frequency1333, Size: 8192MB	Pass
		DIMM A1+B1	Down to Frequency1333, Size:16384MB	Pass
		DIMM A2+B2	Down to Frequency1333, Size:16384MB	Pass
		FULL	Down to Frequency1333, Size:32768MB	Pass
FWA-4208	Intel Xeon Processor X3430 2.40GHz	DIMM A0	Down to Frequency1333, Size: 8184MB	Pass
		DIMM A1	Because of chipset limitation, it can't boot up.	N/A
		DIMM B0	Down to Frequency1333, Size: 8184MB	Pass
		DIMM B1	Because of chipset limitation, it can't boot up.	N/A
		DIMM A0+A1	Down to Frequency1333, Size: 16376MB	Pass
		DIMM B0+B1	Down to Frequency1333, Size: 16376MB	Pass
		FULL	Down to Frequency1333, Size: 32760MB	Pass
ASMB-781	Intel® Core™ i5-2400 3.10 GHz	DIMM A0	Down to Frequency1333, Size: 8192MB	Pass
		DIMM A1	Down to Frequency1333, Size: 8192MB	Pass
		DIMM B0	Down to Frequency1333, Size: 8192MB	Pass
		DIMM B1	Down to Frequency1333, Size: 8192MB	Pass
		DIMM A0+B0	Down to Frequency1333, Size:16384MB	Pass
		DIMM A1+B1	Down to Frequency1333, Size:16384MB	Pass
		FULL	Down to Frequency1333, Size:32768MB	Pass
PCE-5126WG2	Intel Xeon E31275 3.40GHz	DIMM A1	Down to Frequency1333, Size: 8192MB	Pass
		DIMM B1	Down to Frequency1333, Size: 8192MB	Pass
		FULL	Down to Frequency1333, Size:16384MB	Pass

4.1.2 EVEREST Ultimate Edition

Pass Criteria: EVEREST detect the correct Memory information.

Picture:



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
FWA-3210	i7-2600 3.40 GHz	Down to Frequency1333,Size:32768MB	Pass
FWA-4208	X3430 2.40GHz	Down to Frequency1333,Size:32760MB	Pass
ASMB-781	i5-2400 3.10 GHz	Down to Frequency1333,Size:32768MB	Pass
PCE-5126WG2	E31275 3.40GHz	Down to Frequency1333,Size:16384MB	Pass

PS: In PCE-5126WG2, it may occur blurred screen when running MemTest86+ V4.20 over 15 hours(>3cycles).

4.1.4 OS installation

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

MB&SBC: NAMB-3210

OS	Version	Result
Windows XP	Windows XP professional with X32 SP3(English)	Pass
Windows XP	Windows XP professional with X64 SP3(English)	Pass
Windows 7	Windows 7 Ultimate X32(English)	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	Sisoftware Sandra2010.SP3 (16.67)				Result
	Memory Bandwidth-Int Buff'd (GB/s)	Memory Bandwidth Float Buff'd (GB/s)	Memory (Random Access) Latency (ns)	Memory Latency-Speed Factor	
FWA-3210	18	18	77	66.9	Pass
FWA-4208	16.22	16.2	85	50.7	Pass
ASMB-781	18	18	78	67.1	Pass
PCE-5126WG2	18.26	18.25	76	65.2	Pass

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						Result
	Memory score	Item	Memory read (MB/S)	Memory write (MB/S)	Memory copy (MB/S)	Memory latency-Random (Maccesses/s)	
FWA-3210	11595	16MB	17571.189	16584.520	14406.813	12.017	Pass
		8MB	24174.701	16581.172	18200.328	25.883	
		192KB	46067.199	31778.768	31612.518	281.661	
		4KB	77683.516	51310.379	50736.717	873.418	

FWA-4208	7864	16MB	10660.966	8947.938	9673.086	12.017	Pass
		8MB	21863.930	8949.100	12499.255	37.386	
		192KB	17618.654	22148.107	17209.520	233.573	
		4KB	35807.7.3	35943.746	35945.117	597.801	
ASMB-781	11578	16MB	17562.621	16573.279	14384.697	12.017	Pass
		8MB	24097.525	16580.143	18081.012	25.883	
		192KB	46013.477	31696.586	31629.535	281.661	
		4KB	77525.281	51197.379	50627.707	871.762	
PCE-5126WG2	11605	16MB	17931.090	16588.803	14313.096	12.462	Pass
		8MB	24381.244	18568.631	18384.941	24.924	
		192KB	45999.684	31673.471	31551.932	281.661	
		4KB	77509.000	51193.363	50620.406	871.762	

4.3 Reliability test

4.3.1 Room temperature

MB/SBC: FWA-3210/PCE-5126WG2/FWA-4208

OS: Windows XP professional with X32 SP3 (English)

(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_inV7.0	Set CPU/2D/3D/Memory loading 100%; The result should be passed when running Burn_in V7.0 for 12 hours.	Pass

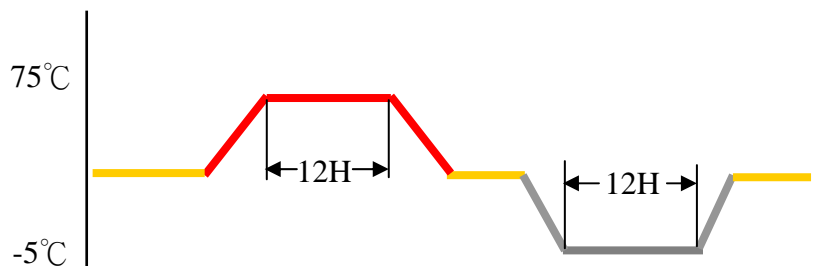
4.3.2 High/Low temperature

Test Environment: -5°C~75°C

Pass Criteria :1. Power on/off 100 times, successful boot rate 100%;

2. Set CPU/2D/3D/Memory loading 100%; The result should be Passed when running Burn_in V6.0 for 12 hours.

OS: Windows XP professional with 32bit SP3 (English)



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

MB/SBC	Power on/off 100 times	Burn_in V6.0 12hours	Remark
ASMB-781	Pass	Pass	

5. Appendix