

96D3-8G1600ER-TRL

Test Report

Test Requestor	Jocy.lin	Job Title		Release Date	2012-01-11
Testing Engineer	Jier.Liu	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

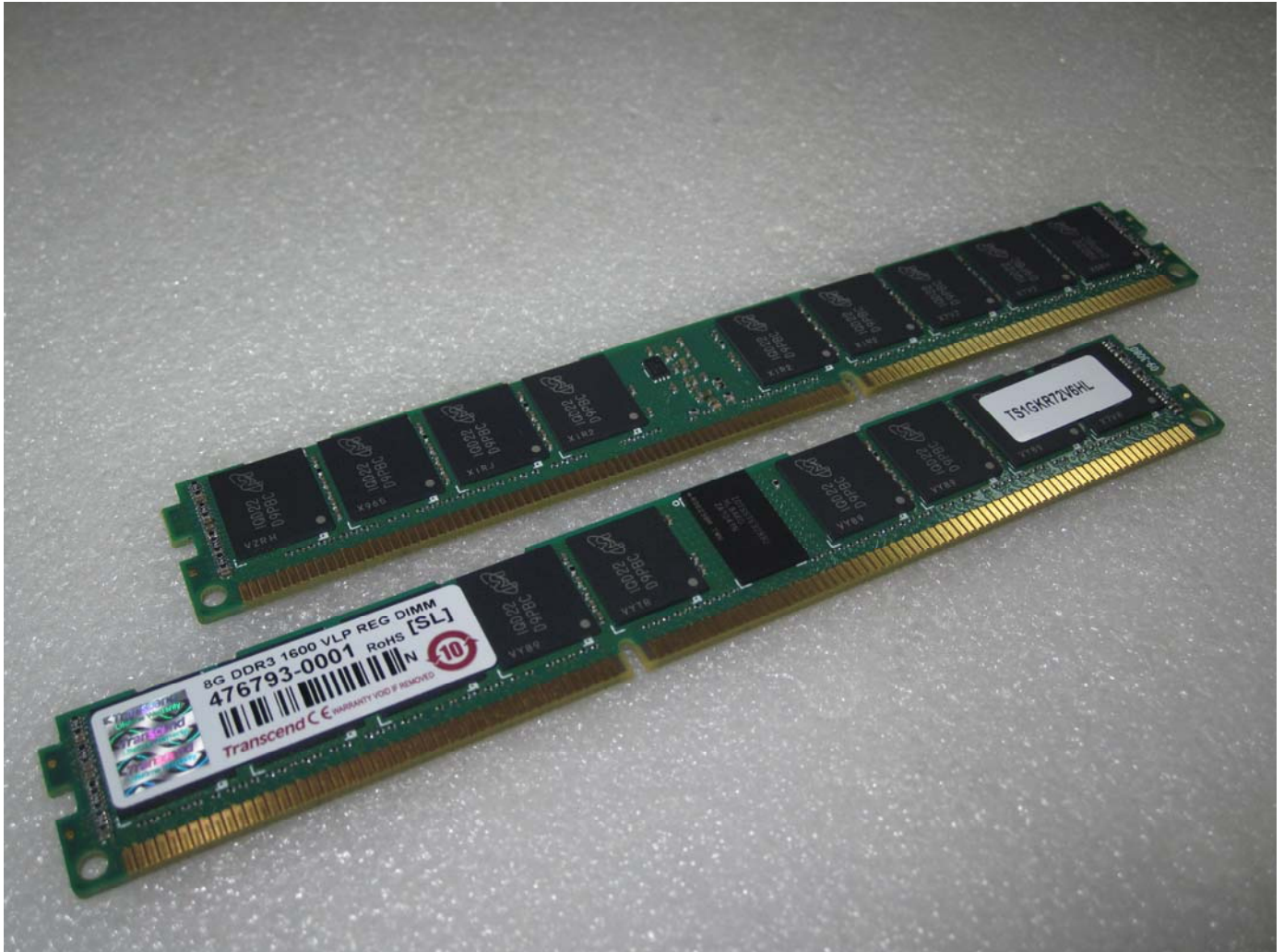
MB/SBC	Core Chipset	Result	Remark
FWA-4208	Intel 3420 PCH	Pass	ES sample(DIMM A Channel is broken)
FWA-6500	Intel® 5520+ICH10R	Pass	
FWA-6510	Sandy Bridge-EP series	Pass	DVT ES

Ps: All test used memory only of 4PCS sample.

1. Product Information:

Advantech Part Number	96D3-8G1600ER-TRL
Manufacturer	Transcend
Module Part NO.	TS1GKR72V6HL
Transcend DB P/N	TS9KRH30800-6M
PCB Part NO.	09-3080
IC Brand(chip model)	Micron 1WD27 D9PBC
Memory Category	DDR3
Socket type	240PIN
Size	8GB
ECC&REG	REG
Bandwidth	12.8GB/sec
Speed Grade	1600Mbps
Max Frequency	800MHz
CAS Latency	CL11
Organization	1G x 72bits
Component Composition	512Mx8bits
Number of Rank	2
Power supply(VDD)	1.5V ± 0.075V
Operating Temperature	0°C to +85°C
Dimension (W x H x D)	133.35x18.75x1.27
RoHS Status (Yes/No)	YES

Photo:




2. Test Platform

MB/SBC	FWA-4208		
PCB version	A103-1	CPU	Intel Xeon Processor X3430 2.40GHZ
BIOS version	T120	DRAM	Transcend DDR3 1600 REG 8GB
Core Chipset	Intel 3420 PCH	Backplane	
VGA Chipset	NVIDIA GT520	Other	Only DIMM B1+B2 can work normally, because the board is ES sample

MB/SBC	FWA-6500		
PCB version	A104-1	CPU	Intel XEON E5504 2.00GHz
BIOS version	A11E	DRAM	Transcend DDR3 1600 REG 8GB
Core Chipset	Intel@ 5520+ICH10R	Backplane	
VGA Chipset	Onboard XGI 21	Other	

MB/SBC	FWA-6510		
PCB version	A102-1	CPU	Intel XEON CPU E5-2648L 1.80GHz
BIOS version	6510X052	DRAM	Transcend DDR3 1600 REG 8GB
Core Chipset	Intel Cougar Point C206	Backplane	
VGA Chipset	ASPEED AST2300	Other	DVT ES

3. Test Software

Utilities	Version / Description
Power On/Off (For Reliability test)	
Passmark BurnIn Test Pro (For Reliability test)	V6.0 build 1029
MemTest86+ (For Function test)	V4.20
EVEREST Ultimate Edition	V5.0
Sisoftware 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-4208	Intel Xeon Processor X3430 /2.40GHZ	DIMM A0	Can't boot up . ES sample(DIMM A Channel is broken)	N/A
		DIMM A1	Can't boot up . ES sample(DIMM A Channel is broken)	N/A
		DIMM B0	Size:8184MB,less than actual size 8MB.	Pass
		DIMM B1	Because of chipset limitation, it can't boot up.	N/A
		DIMM B0+B1	Size:16376MB,less than actual size 8MB.	Pass
FWA-6500	Intel XEON E5504 2.00GHz	DIMM A1	Size:8184MB,less than actual size 8M.	Pass
		DIMM A2	Because of chipset limitation, it can't boot up.	N/A
		DIMM B1	Size:8184MB,less than actual size 8M.	Pass
		DIMM B2	Because of chipset limitation, it can't boot up.	N/A
		DIMM C1	Size:8184MB,less than actual size 8M.	Pass
		DIMM C2	Because of chipset limitation, it can't boot up.	N/A
		DIMM A1+B1+C1	Size:24568MB,less than actual size 8M.	Pass
DIMM A2+B2+C2	Because of chipset limitation, it can't boot up.	N/A		

		DIMM A1+A2++B1+C1)	Size:32760MB,less than actual size 8M.	Pass
FWA-6510	Intel XEON CPU E5-2648L 1.80GHz	DIMM A1+C1+F1+H1	Size:32768MB,less than actual size 0M.	Pass

4.1.2 EVEREST Ultimate Edition

Pass Criteria: EVEREST detect the correct Memory information.

Picture:

Can't Support

4.1.3 MemTest86+ test

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

MB/SBC	CPU	Remark	Result
FWA-4208	Intel Xeon X3430 /2.40GHZ	DIMM B1+B2 Size:16376MB,less than actual size 8MB.	Pass
FWA-6500	Intel XEON E5504 2.00GHZ	DIMM A1+A2+B1+C1 Size:32760MB,less than actual size 8M.	Pass
FWA-6510	Intel XEON CPU E5-2648L 1.80GHz	DIMM A1+C1+F1+H1 Size:32768MB,less than actual size 0M.	Pass

PS:All test used memory only of 4PCS sample.

4.1.4 OS installation

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

MB&SBC: FWA-4208

OS	Version	Result
Win XP	Windows XP professional edition 32bit with SP3	Pass
Win 7	Windows 7 Ultimate 32bit	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-4208	8.84	8.87	89	52.7	Pass(single channel)
FWA-6500	10	10	111	54.5	Pass
FWA-6510	17.22	17.42	118	49.9	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-4208	7659	16MB	9215.039	8821.692	8398.213	11.603	Pass
		8MB	21584.021	8821.282	12485.831	35.419	
		192KB	17628.178	22079.459	17202.684	233.573	
		4KB	35800.23	35941.809	35941.059	597.801	
FWA-6500	5779	16MB	8745.537	8026.327	7828.186	10.011	Pass
		8MB	8670.34	8076.35	7865.297	10.162	
		192KB	14664.636	18339.471	14302.701	198.575	
		4KB	29790.025	30366.061	29903.818	499.913	
FWA-6510	4391	16MB	16113.85	4167.32	6420.002	8.855	Pass
		8MB	16516.51	4169.525	6419.216	8.855	
		192KB	18536.764	12965.957	11331.609	46.338	
		4KB	26691.641	13568.553	13548.266	424.477	

4.3 Reliability test

4.3.1 Room temperature

MB/SBC:FWA-4208/FWA-6500

OS: DOS7.1/Windows XP professional edition 32bit with SP3

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

5. Appendix