

# 96D3-1G1333NN-TR1

## Test Report

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**Revision History:**

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

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**Test Result Definition:**

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

## Test Item List Summary

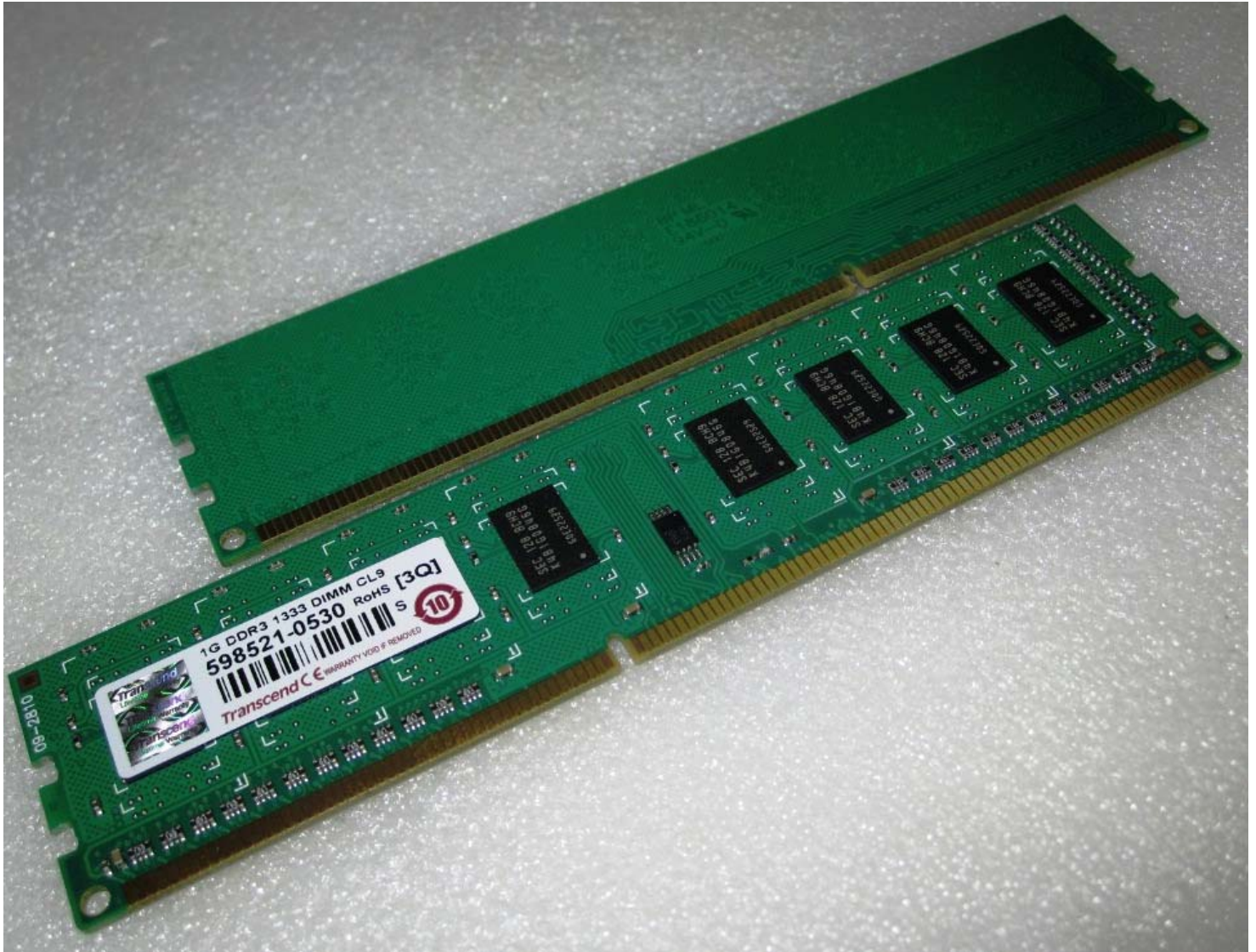
### Motherboard or CPU card compatibility test result

MB/SBC	Core Chipset	Result	Remark
AIMB-780W	Intel 3450	Pass	
PCE-5125Q	Intel Q57	Pass	
IPPC-Q45	Intel Q45+ICH10DO	Pass	
NAMB-3210	Intel Cougar Point C206	Pass	

## 1. Product Information:

<b>Advantech Part Number</b>	96D3-1G1333NN-TR1
<b>Manufacturer</b>	Transcend
<b>Module Part NO.</b>	TS128MLK64V3U
<b>PCB Part NO.</b>	09-2810
<b>IC Brand(chip model)</b>	SEC 128 BCH9 K4B1G0846G
<b>Memory Category</b>	DDR3
<b>Socket type</b>	240Pin
<b>Size</b>	1GB
<b>ECC&amp;REG</b>	NO ECC&REG
<b>Bandwidth</b>	10.6GB/sec
<b>Speed Grade</b>	1333MHz
<b>Max Frequency</b>	666MHz
<b>CAS Latency</b>	CL9
<b>Organization</b>	128Mx64
<b>Component Composition</b>	128Mx8*8EA
<b>Number of Rank</b>	1
<b>Power supply(VDD)</b>	1.5V ± 0.075V
<b>Operating Temperature</b>	0°C - 60°C
<b>Dimension (W x H x D)</b>	133.5x30x1.27
<b>RoHS Status (Yes/No)</b>	Yes

Photo:



## 2. Test Platform


<b>MB/SBC</b>	AIMB-780W		
<b>PCB version</b>	A101-2	<b>CPU</b>	Intel® Core™ X3430 2.40 GHz
<b>BIOS version</b>	V1.10	<b>DRAM</b>	Transcend DDR3 1333 1GBx4
<b>Core Chipset</b>	Intel 3450	<b>Backplane</b>	NA
<b>VGA Chipset</b>	Leadtek GT430 1024M	<b>Other</b>	

<b>MB/SBC</b>	PCE-5125Q		
<b>PCB version</b>	A101-2	<b>CPU</b>	Intel® Core™ i7-860 2.80 GHz
<b>BIOS version</b>	125X0041	<b>DRAM</b>	Transcend DDR3 1333 1GBx2
<b>Core Chipset</b>	Intel Q57	<b>Backplane</b>	PCE-5B13-08_A101-1
<b>VGA Chipset</b>	ASUS EAH5670 DI 512M	<b>Other</b>	

<b>MB/SBC</b>	IPPC-Q45		
<b>PCB version</b>	08GSAQ45005203	<b>CPU</b>	Core2 Duo E8400 3.00GHZ
<b>BIOS version</b>	V1.12	<b>DRAM</b>	Transcend DDR3 1333 1GBx2
<b>Core Chipset</b>	Intel Q45+ICH10DO	<b>Backplane</b>	NA
<b>VGA Chipset</b>	Q45 integrated	<b>Other</b>	

<b>MB/SBC</b>	NAMB-3210		
<b>PCB version</b>	A101-1	<b>CPU</b>	Intel® Core™ i7-2600 3.40 GHz
<b>BIOS version</b>	3210X006	<b>DRAM</b>	Transcend DDR3 1333 1GBx4
<b>Core Chipset</b>	Intel C206	<b>Backplane</b>	NA
<b>VGA Chipset</b>	CPU integrated VGA Controller	<b>Other</b>	

## 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
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

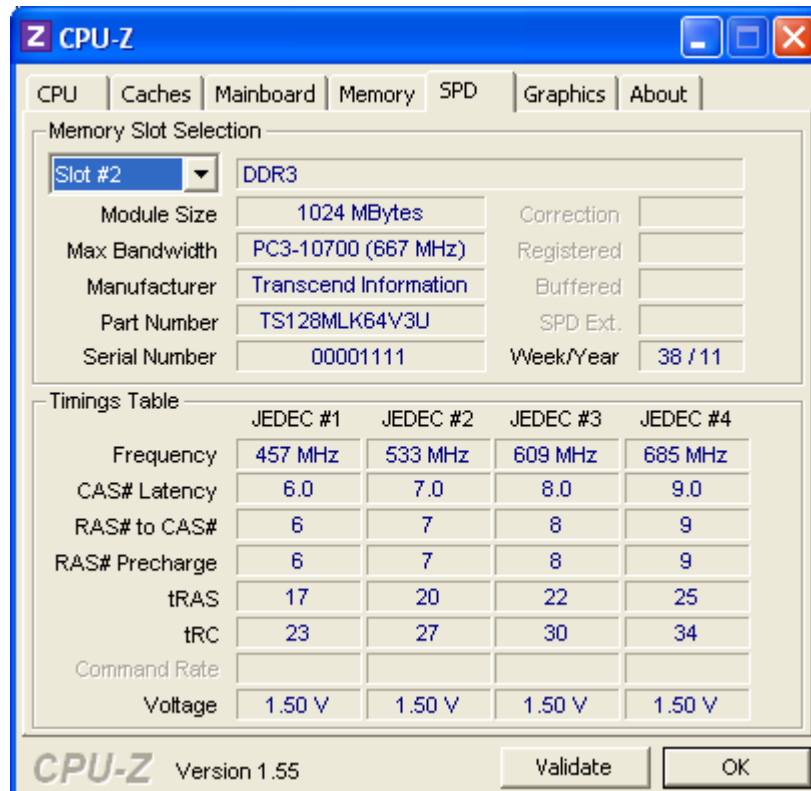
Pass Criteria: Power on/off 10 times, successful boot rate 100% when memory in different socket combination as below, then record memory size and frequency information on the boot screen display.

MB/SBC	CPU	Socket	Remark	Result
AIMB-780W	Intel X3430 2.40GHz	DIMM A1	Frequency1333,Size:984MB,less than actual size40MB.	Pass
		DIMM B1	Frequency1333,Size:984MB,less than actual size40MB.	Pass
		DIMM A2/B2	Because of chipset limitation,it can't boot up.	Limitation
		DIMM A2+B2	Because of chipset limitation,it can't boot up.	Limitation
		DIMM A1+B1	Frequency1333,Size:2008MB,less than actual size40MB.	Pass
		FULL	Frequency1333,Size:4056MB,less than actual size40MB.	Pass
PCE-5125Q	Intel i7-860 2.80GHz	DIMM A1	Frequency1333,Size:984MB,less than actual size40MB.	Pass
		DIMM A2	Frequency1333,Size:984MB,less than actual size40MB.	Pass
		FULL	Frequency1333,Size:2008MB,less than actual size40MB.	Pass
IPPC-Q45	Intel E8400 3.00GHZ	XMM1	Frequency1067,Size:973MB,less than actual size51MB.	Pass
		XMM3	Frequency1067,Size:989MB,less than actual size35MB.	Pass
		FULL	Frequency1067,Size:1981MB,less than actual size67MB.	Pass
NAMB-3210	Inte i7-2600 3.40GHz	DIMM A1	Frequency1333,Size:1024MB,less than actual size0MB.	Pass
		DIMM A2	Frequency1333,Size:1024MB,less than actual size0MB.	Pass
		DIMM B1	Frequency1333,Size:1024MB,less than actual size0MB.	Pass
		DIMM B2	Frequency1333,Size:1024MB,less than actual size0MB.	Pass
		DIMM A1+B1	Frequency1333,Size:2048MB,less than actual size0MB.	Pass
		DIMM A2+B2	Frequency1333,Size:2048MB,less than actual size0MB.	Pass
		FULL	Frequency1333,Size:4096MB,less than actual size0MB.	Pass

#### 4.1.2 Cpu-Z

Pass Criteria: CPU-Z for SPD 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
AIMB-780W	Intel X3430 2.40GHz FSB:1333	Speed:1333;Size:4056MB.	Pass
PCE-5125Q	Intel i7-860 2.80GHz FSB:1333	Speed:1333;Size:2008MB.	Pass
IPPC-Q45	Intel E8400 3.00GHz FSB:1333	Speed:1067;Size:1981MB	Pass
NAMB-3210	Inte i7-2600 3.40GHz FSB:1333	Speed :1333,Size:4096MB	Pass

### 4.1.4 OS installation

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

MB&SBC: IPPC-Q45

OS	Version	Result
Windows XP	Windows XP professional with X32 SP3(English)	Pass
Windows 7	Windows 7 Ultimate X32(English)	Pass
Windows 2008	Windows Server2008 X64 with SP2(English)	Pass

## 4.2 CPU compatibility test

Pass Criteria: Set CPU/2D/3D/Memory loading 100%,run Burn\_in V6.0 for 3H ,and the result should be Passed when memory in single channel or dual channel.

(note: Select the CPU must be include different core and FSB.)

MB/SBC	CPU	In Socket	Remark	Result
AIMB-780W	Intel i5-650 3.20GHz FSB:1333	DIMM A1+B1	Speed:1333;Size:1976MB	Pass
	Intel PG6950 2.80GHz FSB:1066	DIMM A2+B2	Speed:1066;Size:1912MB	Pass
PCE-5125Q	Intel i5-750 2.66GHz FSB:1333	DIMM A1	Speed:1333;Size:984MB	Pass
	Intel i3-530 2.66GHz FSB:1333	DIMM B1	Speed:1333;Size:888MB	Pass
IPPC-Q45	Intel Core2 6300 1.86GHz FSB:1066	XMM1	Speed:1067;Size:989MB	Pass
	Intel E4400 2.00GHz FSB:800	XMM3	Speed:800;Size:989MB	Pass
NAMB-3210	Intel i5-2400 3.10GHz FSB:1333	DIMM A1+B1	Speed:1333;Size:2048MB	Pass
	Intel i3-2100 3.10GHz FSB:1333	DIMM A2+B2	Speed:1333;Size:2048MB	Pass

## 4.3 Performance test

### 4.3.1 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
	CPU	Memory Bandwidth-Int Buff'd (GB/s)	Memory Bandwidth Float Buff'd (GB/s)	Memory (Random Access) Latency (ns)	Memory Latency-Speed Factor	
AIMB-780W	Intel X3430 2.40GHz	16.29	16.32	82	51.3	Pass
PCE-5125Q	Intel i7-860 2.80GHz	15.68	15.5	75	52.2	Pass
IPPC-Q45	Intel E8400 3.00GHz	5.35	5.34	104	82.7	Pass
NAMB-3210	Inte i7-2600 3.40GHz	18	18	72	67.50	Pass

## 4.4 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
	CPU	Memory score	Item	Memory read (MB/S)	Memory write (MB/S)	Memory copy (MB/S)	Memory latency-Random (Maccesses/s)	
AIMB-780W	Intel X3430 2.40GHz	8098	16MB	10917.863	8935.416	9679.981	12.017	Pass
			8MB	22729.975	8934.550	12857.702	37.386	
			192KB	18454.387	23088.920	18026.609	245.551	
			4KB	37522.949	37647.363	37684.719	632.627	
PCE-5125Q	Intel i7-860 2.80GHz	8991	16MB	11635.844	10052.996	10612.188	12.941	Pass
			8MB	25482.502	10033.672	14404.726	42.060	
			192KB	20619.254	25082.957	20117.490	273.614	
			4KB	41812.727	41923.500	41921.625	699.354	
IPPC-Q45	Intel E8400 3.00GHz	5165	16MB	5844.332	5347.292	4888.356	9.904	Pass
			8MB	7667.205	5349.926	5080.925	11.032	
			192KB	15579.852	14284.572	14270.384	143.647	
			4KB	35945.883	34992.281	36030.883	797.183	
NAMB-3210	Inte i7-2600 3.40GHz	12523	16MB	18488.420	17733.420	14889.545	13.459	Pass
			8MB	26664.359	17739.086	19294.207	28.040	
			192KB	49925.746	34527.230	34336.273	308.919	
			4KB	84264.500	55616.613	54999.691	948.506	

## 4.5 Reliability test

### 4.5.1 Room temperature

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 X32 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
PCE-5125Q	Pass	Pass	
IPPC-Q45	Pass	Pass	
NAMB-3210	Pass	Pass	

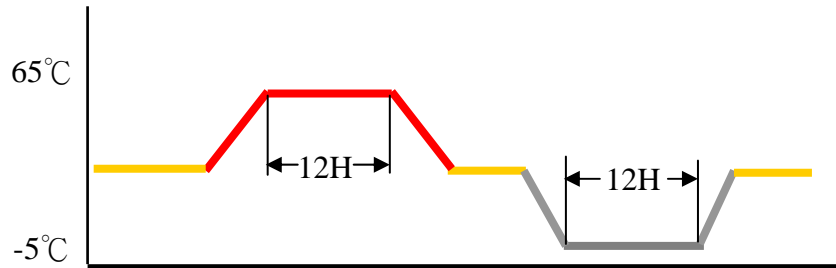
## 4.5.2 High/Low temperature

Test Environment: -5°C~65°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
AIMB-780W	Pass	Pass	

## 5. Appendix