TKS-G20-9455

With 2.5” SATA HDD

Environment Test Report

Report NO: 09E020029

Issued by:	Rex-Chang	/	*04/16/2009*
	Test Engineer		**Date**
Reviewed by:	Wenyuan Yang	/	*04/16/2009*
	Manager		**Date**

Test item list

Test Configuration:

Num	Item	Spec
1.	Control Box:	TKS-G20-9455
	1. Main Board	AAEON GENE-9455 Rev. A1.0 (BIOS: 1.0 for DVI)
	2. CPU	Intel Atom N270 / 1.6GHz
	3. Memory	Transcend 1GB / SEC K4T1G09400
	5. SATA HDD	Fujitsu MHY2060BH 60GB
	6. Power Board	PER-P02D A1.1
	8. Test Software	Windows XP / Run PassMark Burn In Test 4.0 Pro
	7. Mini PCI WLAN	Gigabyte GN-WIAG02
	8. Adapter	LE LE-0316B160080

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Temperature rise test

Test Date: 04-15-2009

Test Product: TKS-G20-9455

Test Site: AAEON QA Internal Lab.

Test Standard: Reference EN 61131-2(94), UL508 (94)

Temperature Measurement:

40 Channel Thermal Recorder:
YOKOGAWA Inc,
Model: DA100-13-1D
Date of Calibration: 12/08/08
Serial Number: 12A323190

Test Condition:

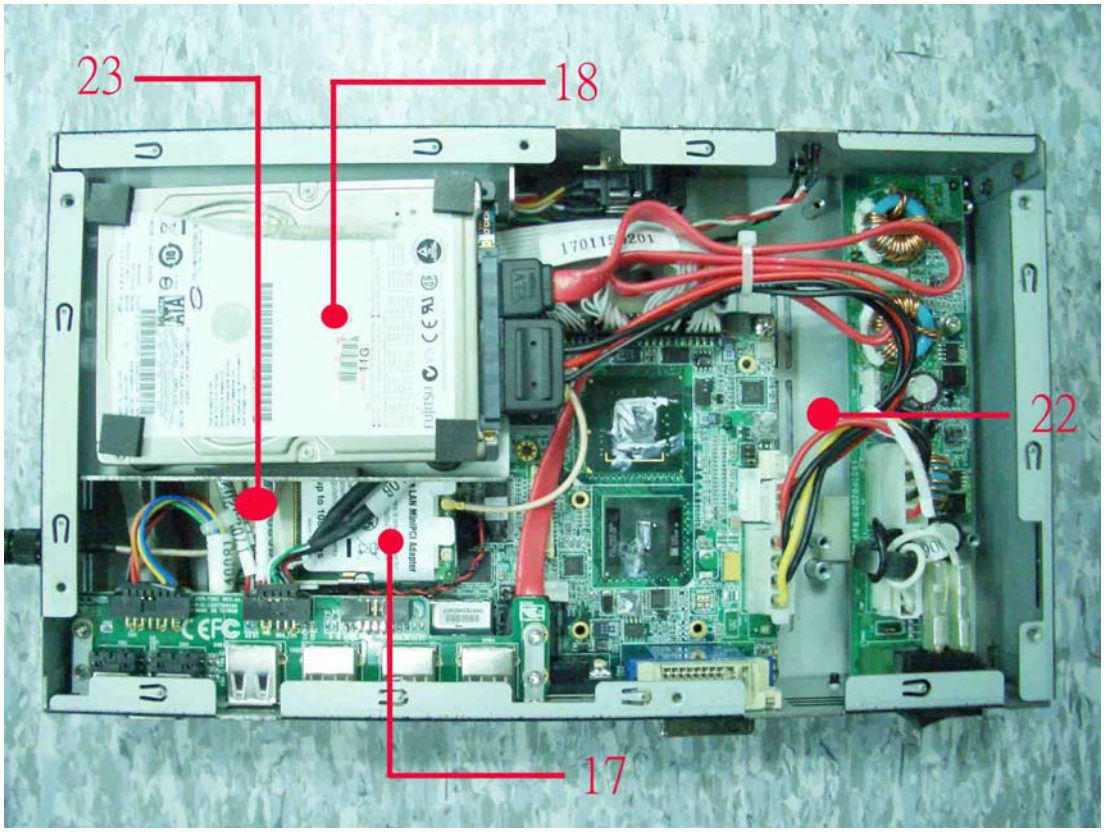
Ambient temperature: 40dC
Continuous running till thermal stability (within less than 1℃)

Test Software:

Windows XP / Run PassMark Burn In Test 4.0 Pro

Terminal Recorder:

Measuring Thermal Couple Position：



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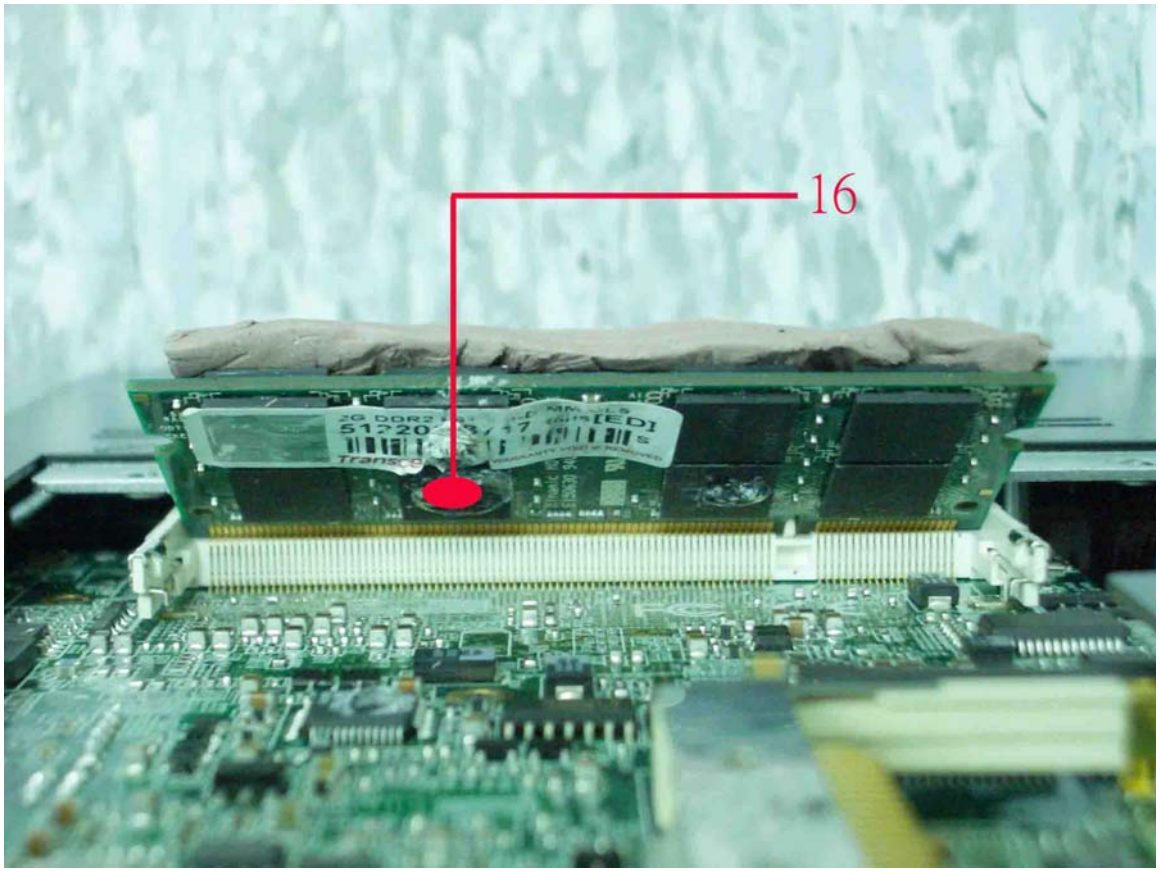

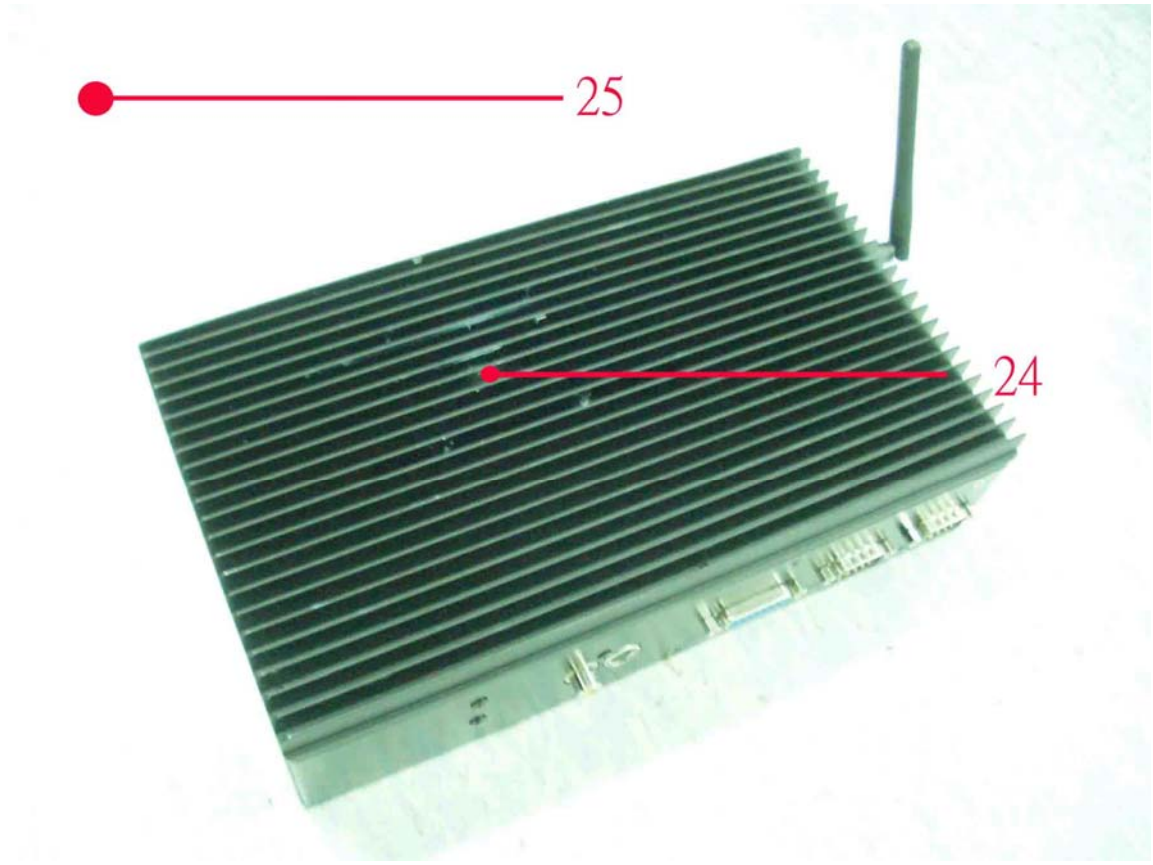

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Temperature rise test

Thermal profile data:

TKS-G20-9455

Point / Temp. Stage(℃)	Spec	40	25
GENE-9455			
1. CPU	90	57.3	42.3
2. U13 - (TF) Intel 945GSE Express Chipset.Intel.QG82945GSE SLB2R	105	54.2	39.2
3. U4 - (TF) Chipset ICH7M.Intel.NH82801GBM SL8YB	99	81.1	66.1
4. U9 - (TF) Super I/O w/4 COMs.ITE.IT8781F/AX-L	100	74.0	59.0
5. U3 - (TF) CLOCK GENERATOR.IDT.9LPRS501PGLF	100	75.5	60.5
6. U7 - (TF) GigaBit Ethernet Chipset.Intel.WG82574L	109	74.0	59.0
7. U17 - (TF) PWR. N-Channel.30V.12A.ANPEC.APM4410KC-TRL	125	79.9	64.9
8. L8 - (TF) COIL.GOTREND.GSTC063P-2R2MN	150	85.9	70.9
9. U19 - (TF) PWR.DirectFET MX.N-MOSFET.IR.IRF6628TRPBF	125	85.9	70.9
10. L7 - (TF) COIL.GOTREND.GSTC063P-1R5MN	150	67.2	52.2
11. U46 - (TF) 6 Channel AC'97 Audio Codec.REALTEK.ALC655-LF	100	76.2	61.2
12. U40 - (TF) Low Dropout Regulator.Adj(1.2~4.8V).SEMTECH.SC1565IS-TRT	115	80.5	65.5
13. U26 - (TF) DVI Transmitter.CHRONTEL.CH7307C-DEF	110	70.6	55.6
14. U50 - (TF) PWR.DirectFET MX.N-MOSFET.IR.IRF6628TRPBF	125	79.8	64.8
15. U20 - (TF) PWR.DirectFET MX.N-MOSFET.IR.IRF6628TRPBF	125	83.5	68.5
16. Memory	95	58.7	43.7
17. Wireless LAN Mini PCI WLAN	N/A	76.4	61.4
18. HDD	60	56.4	41.4
PER-P02D			
19. U2 - (TF) Regulator.Vin 3.5-36V.LINEAR.LTC3728EUH#PBF	85	61.5	46.5
20. Q7 - (TF) PWR.N-Channel 30V MOSFET.VISHAY.SI4410BDY-T1-E3v	125	61.5	46.5
21. U11 - (TF) PWR.SSOP16 MOSFET.LINEAR-TECHNOLOGY.LTC1778EGN	110	58.4	43.4
22. Control Box Inside Air Temperature - 1	N/A	56.4	41.4
23. Control Box Inside Air Temperature - 2	N/A	57.4	42.4
24. Control Box External Surface	N/A	51.8	36.8
25. Chamber Air Temperature	N/A	39.8	24.8
Any Tm value showed in red words which meaning the value over the Tc degree C of this device specification.			

Sample Configuration & Quantity Under Test:

Quantity: 1 (TKS-G20-9455)

Test Result:

No problem was found during the temperature rise operation test.

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Temperature cycle test

Test Date: 04-10~12-2009

Test Product: TKS-G20-9455

Test Site: AAEON QA Internal Lab.

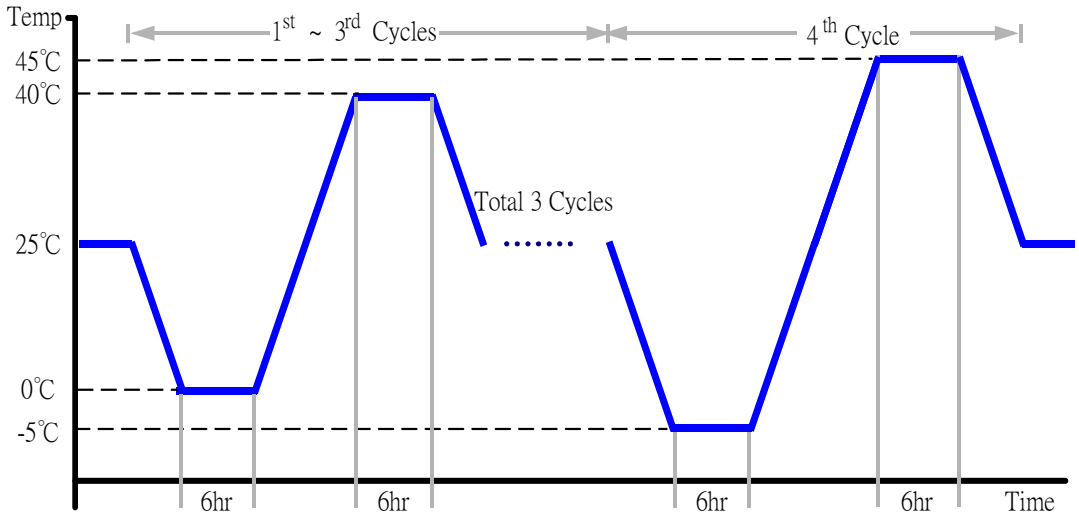
Test Standard: Reference IEC68-2-14 Testing procedures
Test N: Change of temperature Test

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-B6T-150+LN2
Date of Calibration: 04/17/08
Serial Number: 6487KT

Test Condition:

1. Test Low Temperature: 0℃ (1~3 cycles)
   -5℃ (4th cycle)
2. Test High Temperature: 40℃ (1~3 cycles)
   45℃ (4th cycle)
3. Test dwell time: 6Hrs
4. Temperature slope: 2℃/min
5. Test cycle: 4 cycles
6. Test Environment Curve:



Sample Configuration & Quantity Under Test:

Quantity: 1 (TKS-G20-9455)

Test Result:

No problem was found during the temperature operation cycle test.

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Cold start and hot start test

Test Date: 04-13~14-2009

Test Product: TKS-G20-9455

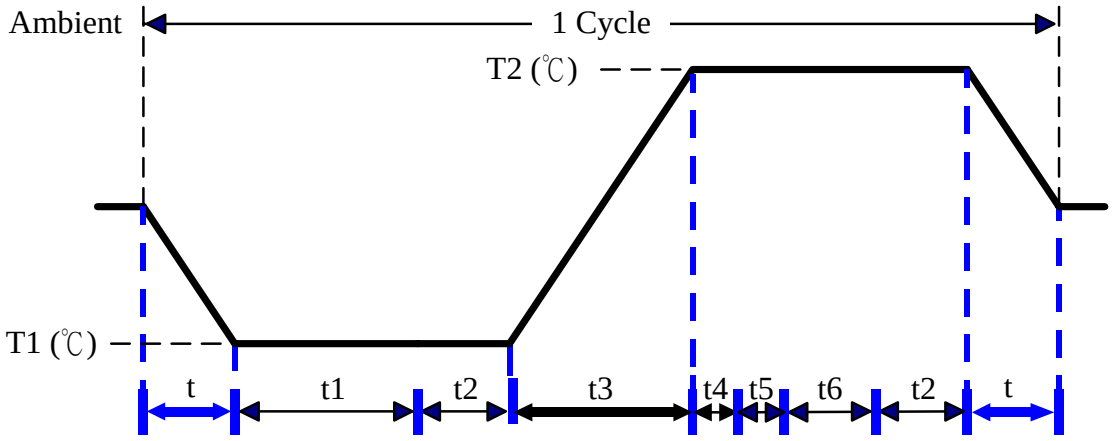
Test Site: AAEON QA Internal Lab.

Test Standard: Reference IEC 68-2-14 Testing procedures
Test N: Change of temperature Test

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-B6T-150+LN2
Date of Calibration: 04/17/08
Serial Number: 6487KT

Test Condition:



Parameters	Description
T1	-5℃
T2	45℃
t1	4 hrs
t2, t6	2 hrs
t4, t5	1hrs
t, t3	2℃/min
n (Cycle)	1

t = temprature slope
t , t1, t6: Power Off
t2: Power on/off test 10 times (on 2 min / off 5min)
t3, t4: Run PassMark Burn In Test
t5: Win XP Software restart test 3 times
Test Software:Windows XP

Test Result:

a. No problem was found during the cold start test.

b. No problem was found during the hot start test.

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