POP-190-G3-HT-0001

Environment Test Report

Report NO: 08P020020

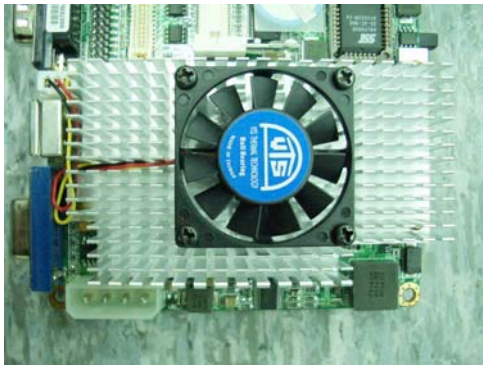
Issued by:	Rex-Chang	/	*10/08/2008*
	Test Engineer		**Date**
Reviewed by:	Wenyuan Yang	/	*10/08/2008*
	Manager		**Date**

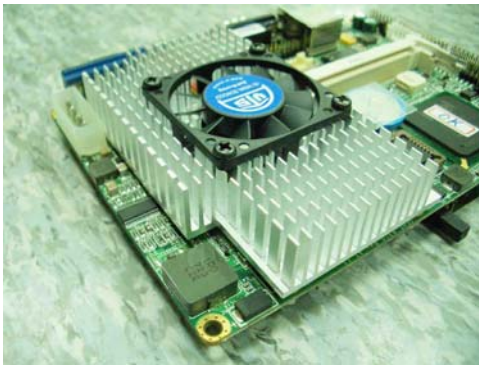
Test item list

Test Configuration:

Num	Item	Spec
1.	**Panel PC**:	POP-190-G3-HT-0001
	1. 19"LCD	M190PW01_AUO
	2. Inverter	HYUNDAI 19" TFT LCD. (4LAMPS) QF132v1.16S
	3. Power Board	AAEON PER-P02D A1.1
	4. Power Adapter	LIEE / LE-0316B160080
2.	CPU Board:	GENE-8310 A1.2
	1. Bios Ver.	POP-190 BIOS VA0.1
	2.CPU	Intel Celeron M Processor 1.5GHz
	3.Memory (Wide Temp.)	Apacer 1GB / V58C25128O4SRJ5I
	4. HDD	FUJITSU MHW2040AT / 40GB
	5.Test Software	Windows XP / Run PassMark Burn In Test 5.1 Pro

Cooler





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Temperature rise test

Test Date: 10-07-2008

Test Product: POP-190-G3-HT-0001

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: 12/13/07
Serial Number: 12A323190

Test Condition:

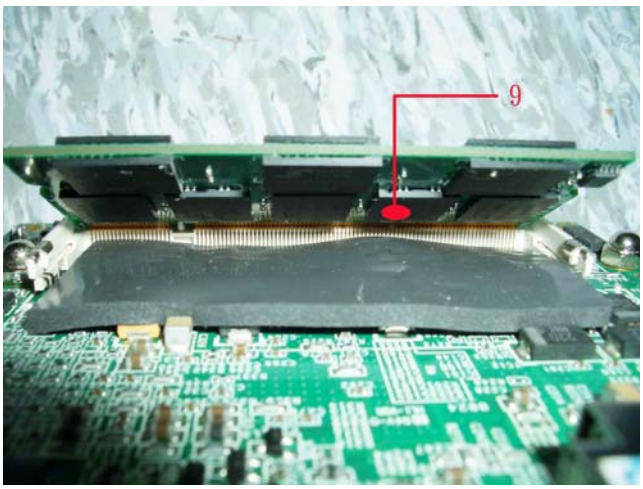
Ambient temperature: 40dC
Continuous running till thermal stability (within less than 1℃)

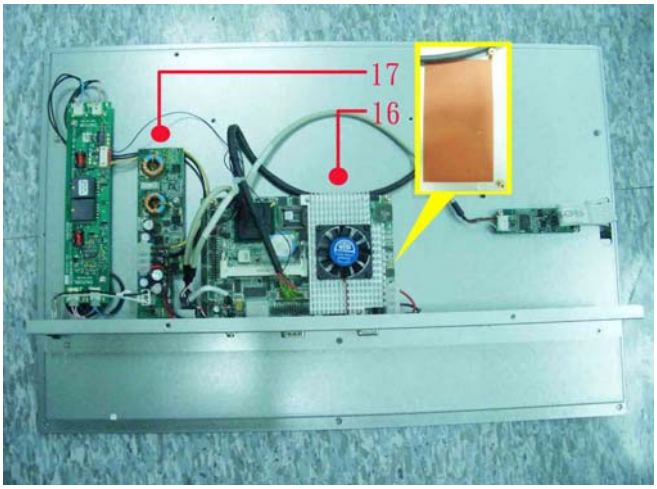
Test Software:

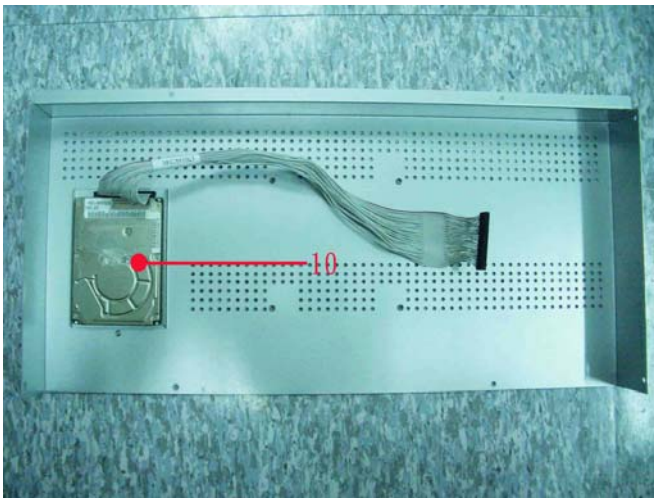
Windows XP / Run PassMark Burn In Test 5.1 Pro

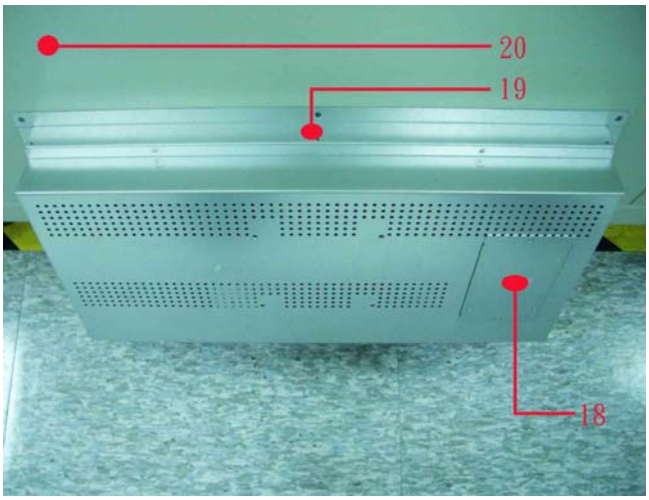
Terminal Recorder:

Measuring Thermal Couple Position：









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Temperature rise test

Thermal profile data:

POP-190-G3-HT-0001

Point \ Temp. Stage(℃)	Spec	40	25
GENE-8310			
01. U4 - (TF) INTEL CPU.Celeron M-1.5G	100	74.8	59.8
02. U8 - (TF) Chipset.NB82852GM.Intel.RG82852GM-SL6ZK	85	68.2	53.2
03. U3 - (TF) Chipset ICH4.INTEL.FW82801DB SL6DM.	115	73.5	58.5
04. U6 - (TF) ICS.ICS952601;EE-A040124;14S3260100;TWN	125	72.1	57.1
05. L2 - (TF) COIL.1.0uH.VISHAY.HLP5050EZER1R0M01	125	80.1	65.1
06. U35 - (TF) Super I/O.ITE.IT8712F-A/IX-L	95	71.0	56.0
07. U47 - (TF) IMVP4 Single Phase PWM.Intersil.ISL6218CVZ	100	79.5	64.5
07. U16 - (TF) 6 Channel AC'97 Audio Codec.REALTEK.ALC655-LF	95	70.7	55.7
09. Memory (Wide Temp.)	85	81.9	66.9
10. HDD	60	54.9	39.9
PER-P02D Power Board			
11. U2 - (TF) Regulator.Vin 3.5-36V.LINEAR.LTC3728EUH#PBF	85	81.3	66.3
12. Q7 - (TF)PWR.N-Channel 30V MOSFET.VISHAY.SI4410BDY-T1-E3v	125	95.2	80.2
13. U1 - (TF)PWR.SSOP16 MOSFET.LINEAR-TECHNOLOGY.LTC1778EGN	110	98.4	83.4
Inverter			
14. Inverter - Q2	150	104.6	89.6
15. Inverter - IC1	85	77.8	62.8
16. Control Box Internal Air Temperature -1	N/A	61.3	46.3
17. Control Box Internal Air Temperature -2	N/A	63.2	48.2
18. Control Box External Surface -1	N/A	52.1	37.1
19. Control Box External Surface -2	N/A	52.6	37.6
20. Chamber Air Temperature	N/A	39.9	24.9
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 (POP-190-G3-HT-0001)

Test Result:

No problem was found during the temperature rise operation test.

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Temperature cycle test

Test Date: 09-27~29-2008

Test Product: POP-190-G3-HT-0001

Test Site: AAEON QA Internal Lab.

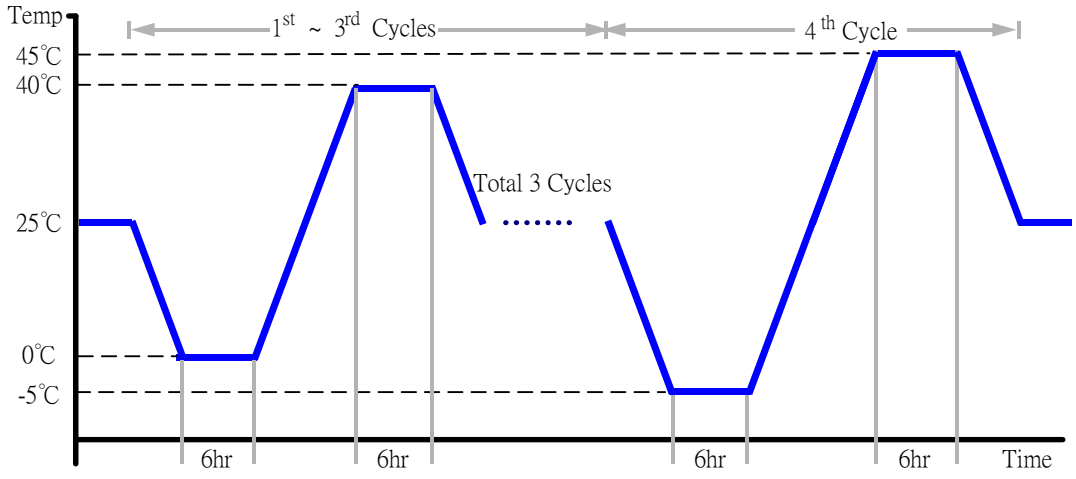
Test Standard: Reference IEC68-2-14 Testing procedures
Test N: Change of temperature Test

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4H+-100
Date of Calibration: 05/12/08
Serial Number: 1241

Test Condition:

1. Test Low Temperature: 0℃ (1~3 cycles)
   -5℃ (4^{th} cycle)
2. Test High Temperature: 40℃ (1~3 cycles)
   45℃ (4^{th} cycle)
3. Test dwell time: 6Hrs
4. Temperature slope: 2℃/min
5. Test cycle: 4 cycles
6. Test Software: Windows XP / Run PassMark Burn In Test 5.1 Pro
7. Test Environment Curve:



Sample Configuration & Quantity Under Test:

Quantity: 1 (POP-190-G3-HT-0001)

Test Result:

No problem was found during the temperature cycle operation test.

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High temperature storage test

Test Date: 10-01~03-2008

Test Product: POP-190-G3-HT-0001

Test Site: AAEON QA Internal Lab.

Test Standard: Reference IEC 68-2-2 Testing procedures
Test Bb: Dry Heat Test (Non-operation)

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4H+-100
Date of Calibration: 05/12/08
Serial Number: 1241

Testing Item:

1. Test Temperature: 60℃
2. Test Times: 48Hrs
3. Test Software: Windows XP / Run PassMark Burn In Test 5.1 Pro
4. Test Environment Curve:

Sample Configuration & Quantity Under Test:
Quantity: 1 (POP-190-G3-HT-0001)

Test Result:

No problem was found after the high temperature storage test.

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Low temperature storage test

Test Date: 09-24~26-2008

Test Product: POP-190-G3-HT-0001

Test Site: AAEON QA Internal Lab.

Test Standard: Reference IEC 68-2-1 Testing procedures
Test Ab: Cold Test (Non-operation)

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4H+-100
Date of Calibration: 05/12/08
Serial Number: 1241

Testing Item:

1. Test Temperature: -20℃
2. Test Times: 48Hrs
3. Test Software: Windows XP / Run PassMark Burn In Test 5.1 Pro
4. Test Environment Curve:

Sample Configuration & Quantity Under Test:
Quantity: 1 (POP-190-G3-HT-0001)

Test Result:
No problem was found after the low temperature storage test.

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Humidity test

Test Date: 10-03~05-2008

Test Product: POP-190-G3-HT-0001

Test Site: AAEON QA Internal Lab.

Test Standard: Reference IEC 68-2-3 Testing procedures
Test Ca: Damp heat, steady state (Non-operation)

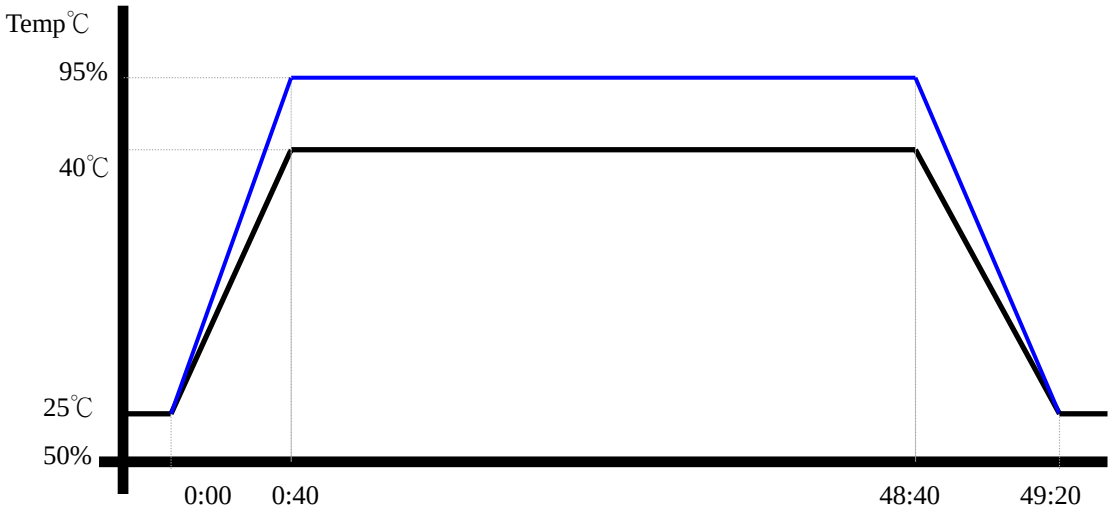
Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4H+-100
Date of Calibration: 05/12/08
Serial Number: 1241

Testing Item:

1. Test Temperature: 40℃
2. Test Humidity: 95%RH
3. Test Times: 48Hrs
4. Test Software: Windows XP / Run PassMark Burn In Test 5.1 Pro
5. Test Environment Curve:

Humidity %



Sample Configuration & Quantity Under Test:
Quantity: 1 (POP-190-G3-HT-0001)

Test Result:

No problem was found after the humidity storage test.

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Cold start and hot start test

Test Date: 09-26~27-2008

Test Product: POP-190-G3-HT-0001

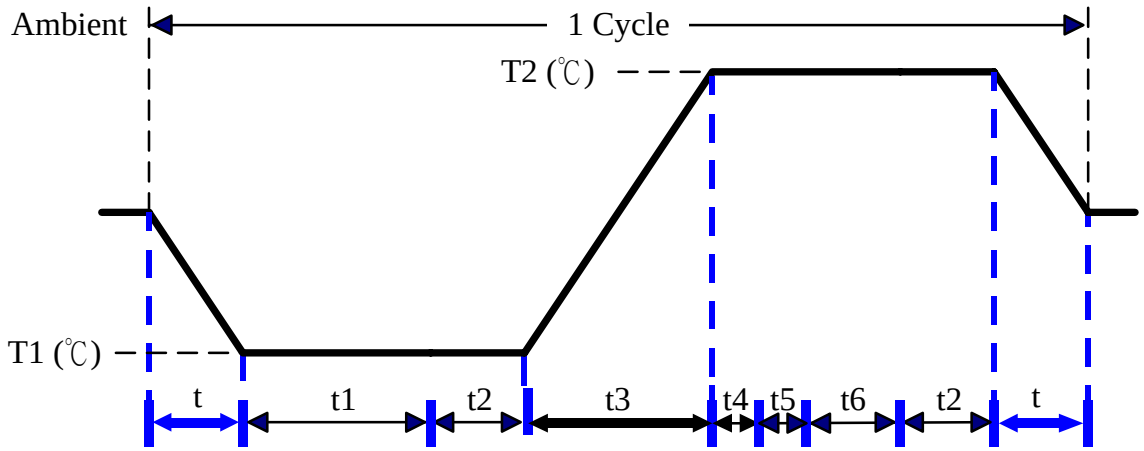
Test Site: AAEON QA Internal Lab.

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-D4H+-100
Date of Calibration: 05/12/08
Serial Number: 1241

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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