FWS-7600

Environment Test Report

Report NO: 08I020008

Issued by:	Rex Chang	/	*04/17/2008*
	Test Engineer		**Date**
Reviewed by:	Wenyuan Yang	/	*04/17/2008*
	Manager		**Date**

Test item list

Num	Item	Spec
1.	Mounting Chassis:	FWS-7600
	1. PCB / CPU	FWB-7600 A0.2 (BIOS: 0.4)
	2. North Bridge	Intel 3010
	3. South Bridge	ICH7R
	4. Memory	Transcend DDR2-ECC 1GB / Transcend E5108AGBG * 4
	5. CFD	PQI 32MB (for DOS mode Power on/off test)
	6. SATA HDD	HITACHI HDS721616PLA380 / 160GB
	7. Mini PCI VGA Card	mPCI-8750
	8. Test Software	Windows XP / Run PassMark Burn In Test 4.0 Pro
2.	Power Supply	FSP FSP065-A 19V 3.42A

AAEON Technology Inc.
5F, No.135, Lane 235, Pao Chiao Rd.,
Hsin-Tien City, Taipei, Taiwan, R.O.C.
TEL: +886-2-8919-1234
FAX: +886-2-8919-1056
http://www.aaeon.com.tw

Temp./humidity power on/off test

Test Date: 04-15~16-2008

Test Product: FWB-7600 A0.2 (with mini PCI VGA Card)

Test Site: AAEON QA Internal Lab.

Test Standard: Reference IEC 68-2-30 Testing procedures
Test Db: Damp Heat Test

Test Equipment:

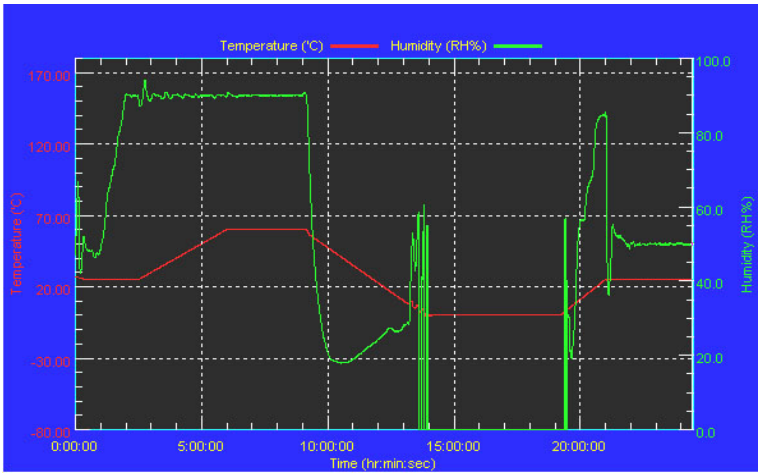
Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D7S-100+1 N2
Date of Calibration: 12/13/07
Serial Number: 3898

Temperature & Humidity Power On/Off Test:

Testing Specification:

Step	Temperature (℃)	Humidity (%RH)	Duration (HH:MM)
1	25	50	00:30
2	25	50	00:30
3	25	90	01:00
4	25	90	00:30
5	60	90	03:30
6	60	90	03:00
7	0	0	04:50
8	0	0	05:23
9	25	50	01:47
10	25	50	03:00

Test Curve:



Sample Configuration & Quantity Under Test:

Quantity: 1 (FWB-6700)

Test Result:

No problem was found during the temperature & humidity power on/off test.

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Temperature cycle test

Test Date: 11-02~05-2007

Test Product: FWS-7600 (with mini PCI VGA card)

Test Site: AAEON QA Internal Lab.

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

Test Equipment:

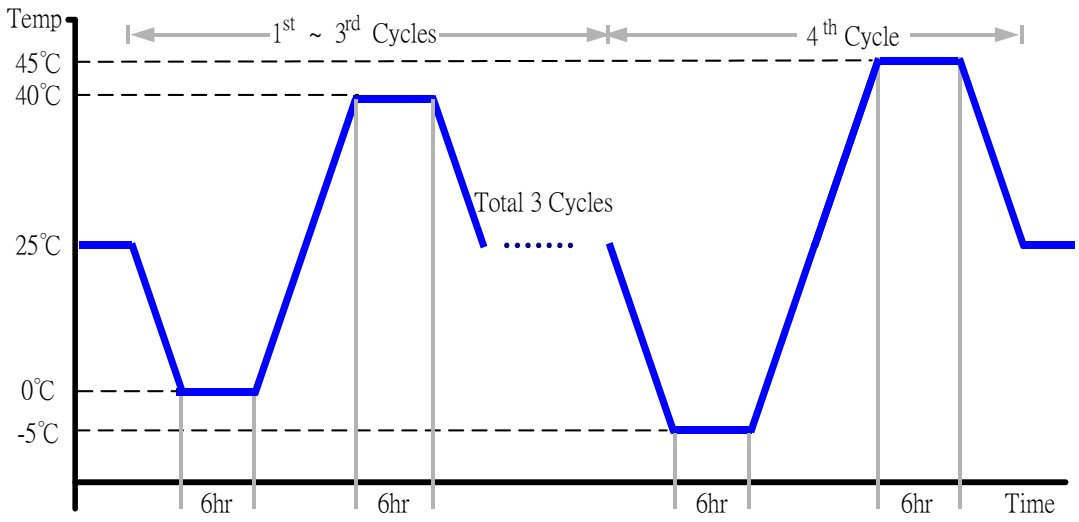
Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D7S-100+1 N2
Date of Calibration: 12/13/07
Serial Number: 3898

Temperature Measurement:

40 Channel Thermal Recorder:
YOKOGAWA Inc,
Model: DA100-13-1D
Date of Calibration: 12/13/07
Serial Number: 12A323190

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 Environment Curve:



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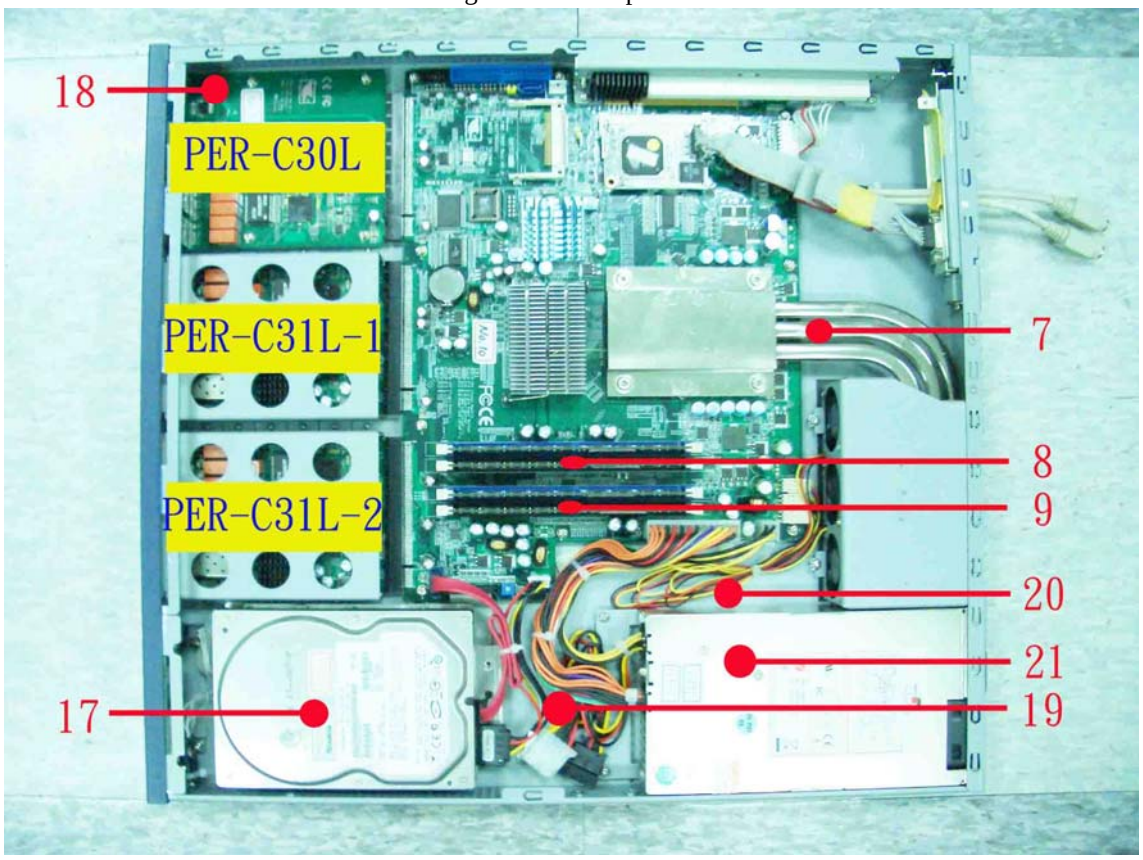
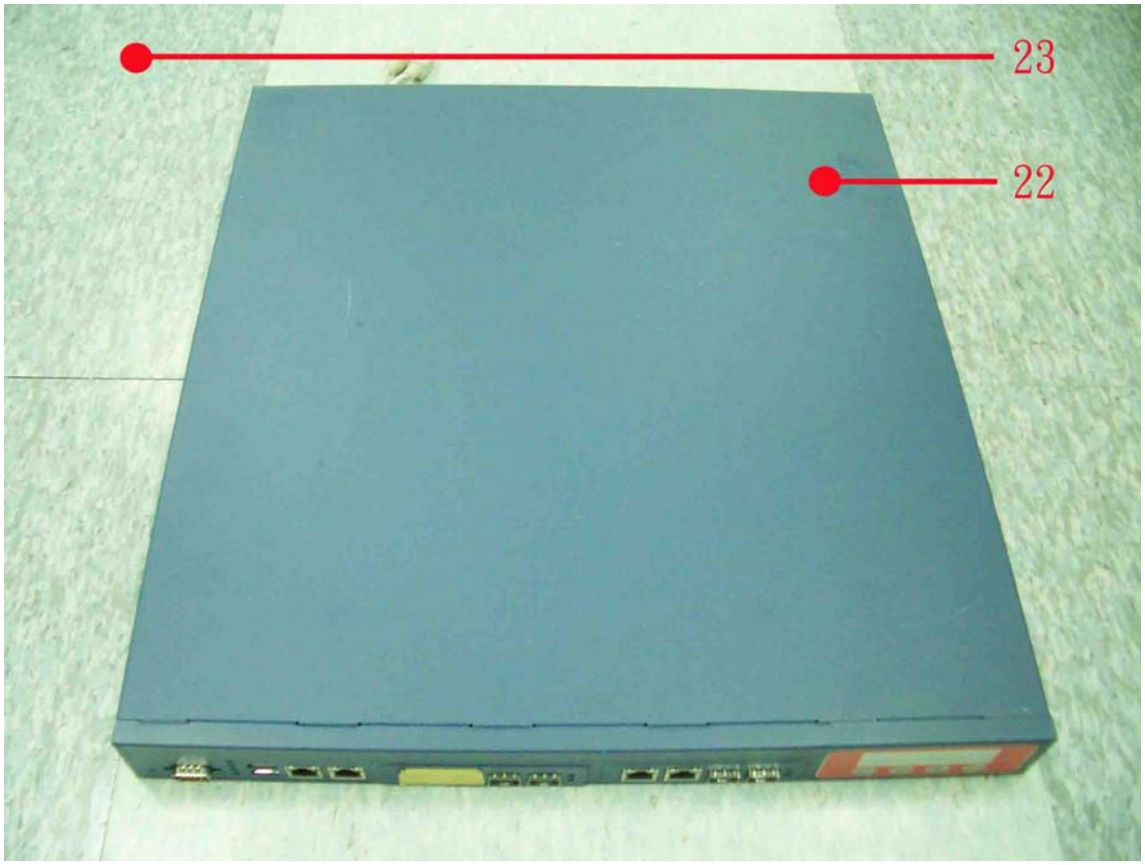
Temperature cycle test

Temperature Recorder:

Measuring Thermal Couple Position：





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Temperature cycle test

Thermal profile data:

FWS-7600

Point / Temp. Stage(℃)	Spec	40	25	0
1. CPU: Intel Pentium 4 / 2.8GHz	70.8	68.4	53.4	28.4
2. U22 - (TF) Intel.QG3010 SL9Q6.	105	58.2	43.2	18.2
3. U21 - (TF) ICH7R.INTEL.NH82801GR SL8FY A1	99	60.7	45.7	20.7
4. U26 - (TF) ICS.ICS9DB108BFLF	115	61.0	46.0	21.0
5. L2 - (TF)COIL.GOTREND.GSTC133P-R68MF	125	74.3	59.3	34.3
6. L1 - (TF)COIL.GOTREND.GSTC133P-R68MF	125	73.9	58.9	33.9
7. Heat Pipe	N/A	62.4	47.4	22.4
8. Memory -1	70	50.5	35.5	10.5
9. Memory -2	70	49.4	34.4	9.4
10.U30 - (TF)MOSFET Drivers.INTERSIL.ISL6612ACBZ	110	58.2	43.2	18.2
11.U5 - (TF) GigaBit Ethernet Chipset.Intel.PC82573L (PER-C30L)	70	50.2	35.2	10.2
12.U2 - (TF) GigaBit Ethernet Chipset.Intel.PC82573L (PER-C30L)	70	47.9	32.9	7.9
13.U4 - (TF) GigaBit Ethernet Chipset.Intel.PC82573L (PER-C31L-1)	70	52.7	37.7	12.7
14.U3 - (TF) GigaBit Ethernet Chipset.Intel.PC82573L (PER-C31L-1)	70	54.8	39.8	14.8
15.U4 - (TF) GigaBit Ethernet Chipset.Intel.PC82573L (PER-C31L-2)	70	50.5	35.5	10.5
16.U3 - (TF) GigaBit Ethernet Chipset.Intel.PC82573L (PER-C31L-2)	70	48.4	33.4	8.4
17. HDD	55	44.7	29.7	4.7
18. Control Box Internal Air Temperature - 1	N/A	42.6	27.6	2.6
19. Control Box Internal Air Temperature - 2	N/A	43.2	28.2	3.2
20. Control Box Internal Air Temperature - 3	N/A	43.9	28.9	3.9
21.Power Supply	50	44.1	29.1	4.1
22.Control Box External Surface	N/A	47.0	32.0	7.0
23.Chamber Air Temperature	N/A	40.9	25.9	0.9

Sample Configuration & Quantity Under Test:

Quantity: 1 (FWS-7600)

Test Result:

No problem was found during the temperature cycle operation test.

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High temperature storage test

Test Date: 04-07~09-2008

Test Product: FWS-7600 (with mini PCI VGA card)

Test Site: AAEON QA Internal Lab.

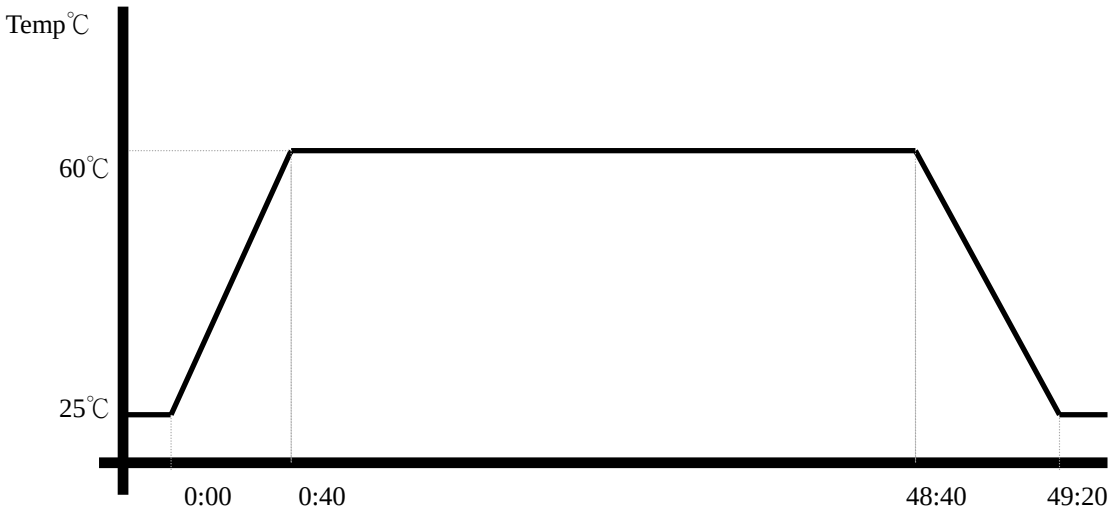
Test Standard: Reference IEC 68-2-2 Testing procedures
Test Bb: Dry Heat Test (Non-operation)

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D7S-100+1 N2
Date of Calibration: 12/13/07
Serial Number: 3898

Testing Item:

1. Test Temperature: 60℃
2. Test Times: 48Hrs
3. Test Software: Windows XP / Run PassMark Burn In Test 4.0 Pro
4. Test Environment Curve:



Sample Configuration & Quantity Under Test:
Quantity: 1 (FWS-7600)

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

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Low temperature storage test

Test Date: 04-09~11-2008

Test Product: FWS-7600 (with mini PCI VGA card)

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-D7S-100+1 N2
Date of Calibration: 12/13/07
Serial Number: 3898

Testing Item:

1. Test Temperature: -20℃
2. Test Times: 48Hrs
3. Test Software: Windows XP / Run PassMark Burn In Test 4.0 Pro
4. Test Environment Curve:

Sample Configuration & Quantity Under Test:
Quantity: 1 (FWS-7600)

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

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Humidity test

Test Date: 04-11~14-2008

Test Product: FWS-7600 (with mini PCI VGA card)

Test Site: AAEON QA Internal Lab.

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

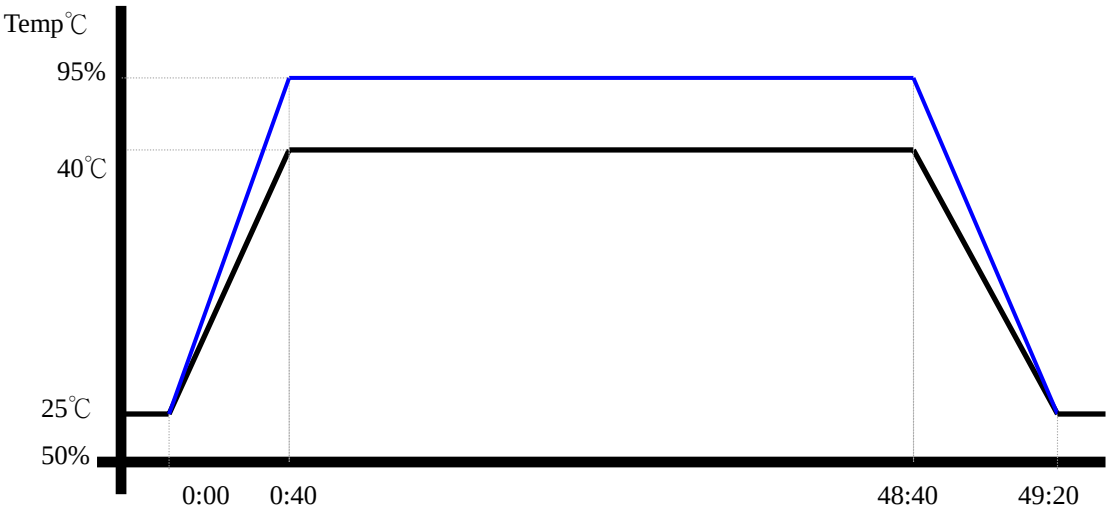
Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D7S-100+1 N2
Date of Calibration: 12/13/07
Serial Number: 3898

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 4.0 Pro
5. Test Environment Curve:

Humidity %



Sample Configuration & Quantity Under Test:
Quantity: 1 (FWS-7600)

Test Result:

No problem was found after the humidity test.

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Cold start and hot start test

Test Date: 04-16~17-2008

Test Site: AAEON QA Internal Lab.

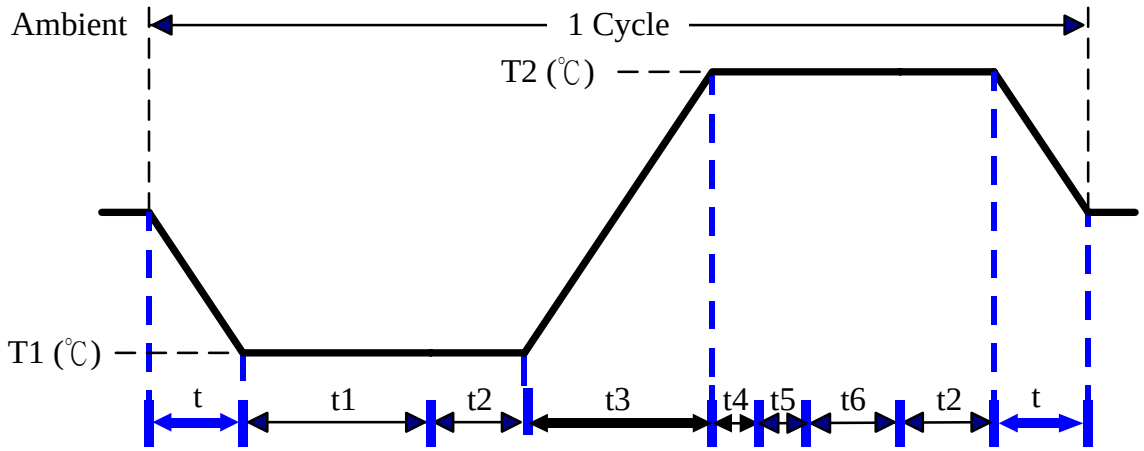
Test Product: FWS-7600 (with mini PCI VGA card)

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-D7S-100+1 N2
Date of Calibration: 12/13/07
Serial Number: 3898

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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