



Industrial Computing Platform Partner

FWS-810

1U 6port firewall

Environment Test Report

Report NO: 07I020001

Issued by: **Sean Hsu** / **01/23/2007**

Test Engineer Date

Reviewed by: **Wenyuan Yang** / **01/23/2007**

Manager Date

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Num	Item	Spec
1.	6 Port 1U Firewall:	FWS-810
2.	Main Board	AAEON FWB-810 A0.2
	1. BIOS	FWS-810 BIOS Rev 0.7 (12/28/2006)
	2. CPU	Intel Pentium 4 Socket 478 3.2GHz
	3. Chipset	Intel 865G + Intel 82801SB (ICH5)
	4. VGA	Integrated VGA on Intel 865G
	5. Ethernet	Intel LU82541P*6
	6. Memory	Transcend V58C2512804SBI5 DDR400 1GB*1 Transcend /SAMSUNG K4H510838C-UCCC DDR400 1GB*1
3.	SATA HDD	Seagate ST3120827AS 120GB
4.	Power Supply	FSP FSP250-601U ATX Power 250W

Temperature cycle test

Test Date: 01-12~14-2007

Test Product: FWS-810

Test Site: AAEON QA Internal Lab.

Performed By: Sean Hsu

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

Test Equipment:

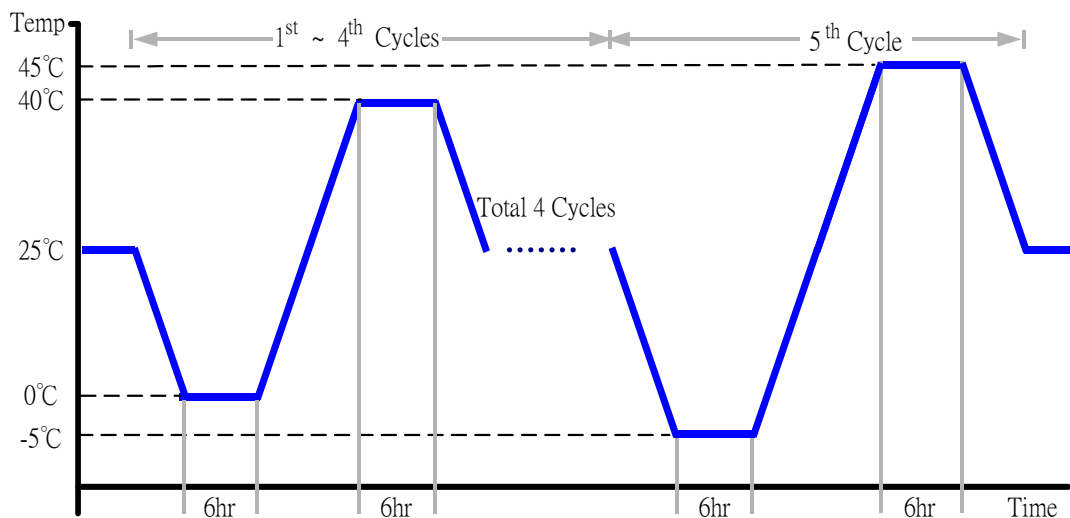
Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4L+-100
Date of Calibration: 11/21/05
Serial Number: 2582

Temperature Measurement:

40 Channel Thermal Recorder:
YOKOGAWA Inc,
Model: DA100-13-1D
Date of Calibration: 12/14/05
Serial Number: 12A323190

Test Condition:

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



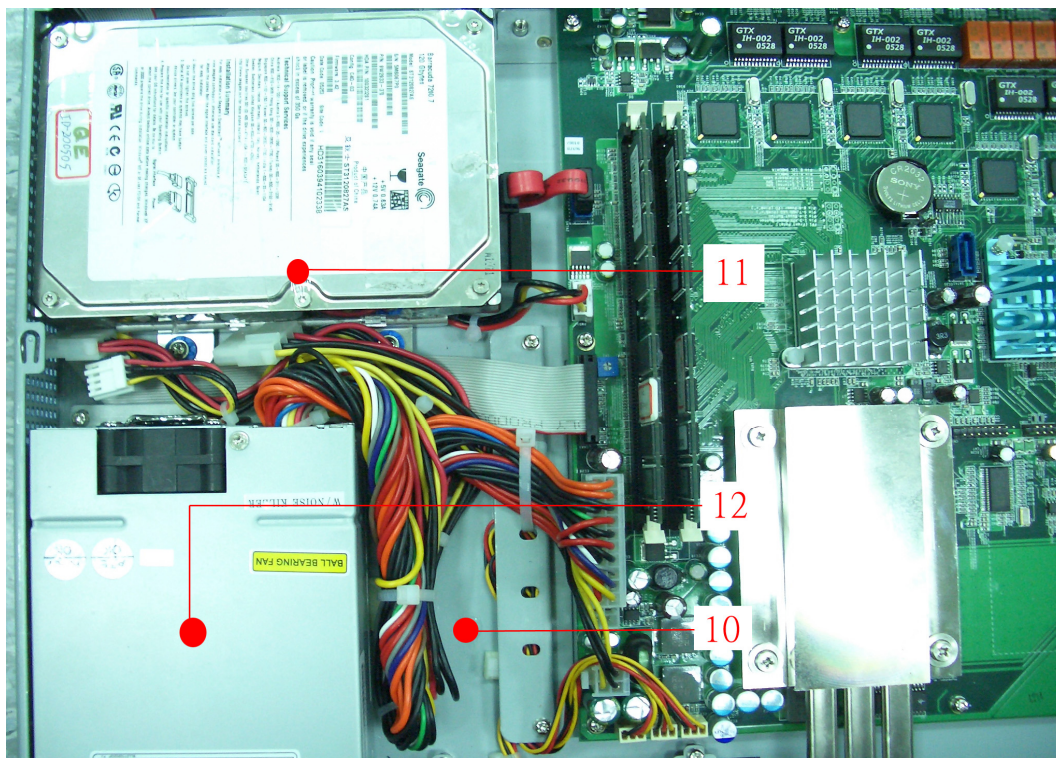
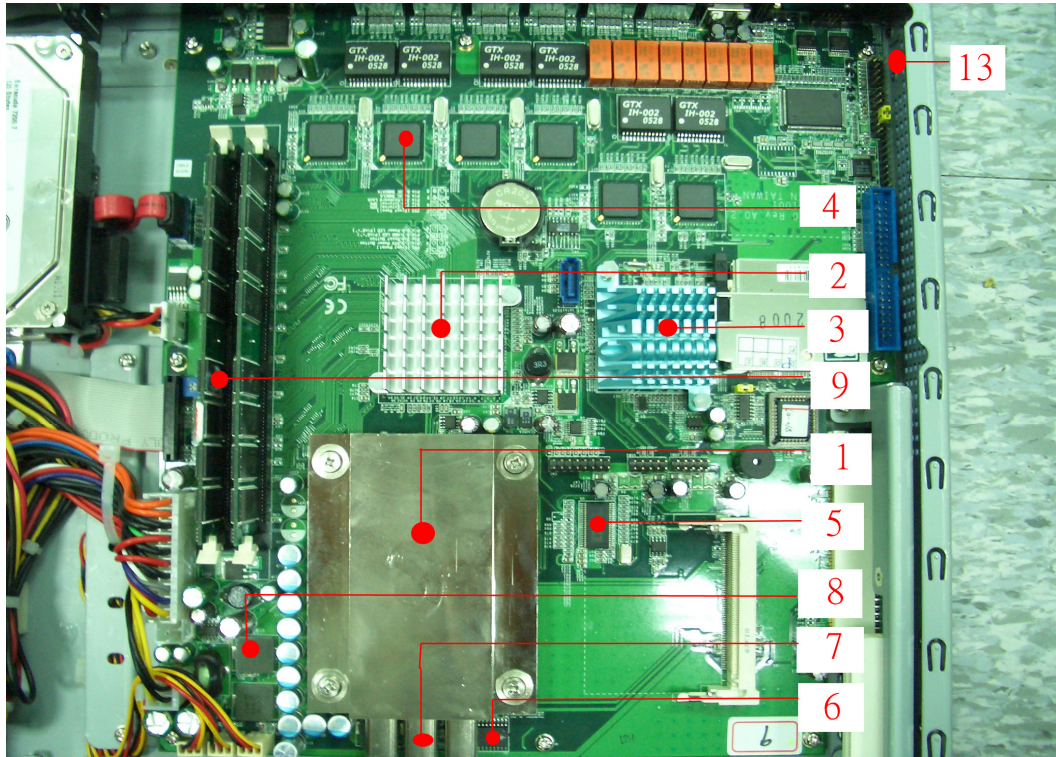
Temperature cycle test

Test O.S. / Software:

Windows 2000 / Run PassMark Burn In Test Pro 4.0

Temperature Recorder:

Measuring Thermal Couple Position :



Temperature cycle test

Thermal profile data:

FWS-810

Point	Temp. Stage(°C)	Spec	45	40	25	0	-5
1. CPU: Intel Pentium 4 Socket 478 3.2GHz		70	65.8	60.8	45.8	20.8	15.8
2. U12- (TF) IC.SMD.FC-BGA932.GMCH.INTEL.JG82865GV SL7YF		95	71.6	66.6	51.6	26.6	21.6
3. U13- (TF) IC.SMD.Chipset ICH5.INTEL.NH82801EB SL7YC		115	54.1	49.1	34.1	9.1	4.1
4. U23- (TF) IC.SMD BGA 196P.GigaBit Ethernet Chipset.INTEL.LU82541P		100	59.3	54.3	39.3	14.3	9.3
5. U5-(TF)IC.SMD.SSOP 48Pin Clock Generator.ICS.ICS952607FLF-T		100	72.1	67.1	52.1	27.1	22.1
6. U1-(TF)IC.SMD.SOIC 28Pin PWM Controller.Intersil.ISL6556BCBZ		80	62.2	57.2	42.2	17.2	12.2
7. Heat -Pipe		N/A	62.5	57.5	42.5	17.5	12.5
8.L4- (TF) COIL.GOTREND.GSTC133P-R68MF		85	71.7	66.7	51.7	26.7	21.7
9. Memory: SAMSUNG K4H510838C-UCCC DDR400 1GB		70	62.8	57.8	42.8	17.8	12.8
10. Control box inside air temperature		N/A	50.4	45.4	30.4	5.4	0.4
11. SATA HDD: Seagate ST3120026AS 120GB		N/A	51	46	31	6	1
12. Power Supply: FSP FSP250-601U 250W		70	60.8	46.7	40.8	15.8	10.8
13 Control box inside air temperature		N/A	51.1	46.1	31.1	6.1	1.1
14. Chamber Air Temperature		N/A	45.9	40.9	25.9	0.9	-4.1
1. Tm (Measured operation temperature) must less than Tc (Specified case temperature) + 5 degree C. 2. Any Tm value showed in red words which meaning the value over the Tc + 5 degree C of this device specification.							

Sample Configuration & Quantity Under Test:

Quantity: 1 (FWS-810)

Test Result:

No problem was found during the high temperature operation test.

High temperature storage test

Test Date: 01-10~11-2007

Test Product: FWS-810

Test Site: AAEON QA Internal Lab.

Performed By: Sean Hsu

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-D4L+-100

Date of Calibration: 11/21/05

Serial Number: 2582

Testing Item:

1. Test Temperature: 60°C
2. Test Times: 48Hrs
3. Test Software: Windows 2000 / Run PassMark Burn In Test Pro 4.0
4. Test Environment Curve:



Sample Configuration & Quantity Under Test:

Quantity: 1 (FWS-810)

Test Result:

No problem was found after the high temperature storage test.

Test Date: 01-8~9-2007

Test Product: FWS-810

Test Site: AAEON QA Internal Lab.

Performed By: Sean Hsu

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: 12/14/05
Serial Number: 3898

Testing Item:

1. Test Temperature: -20°C
2. Test Times: 48Hrs
3. Test Software: Windows 2000 / Run PassMark Burn In Test Pro 4.0
4. Test Environment Curve:



Sample Configuration & Quantity Under Test:
Quantity: 1 (FWS-810)

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

Test Date: 01-16~17-2007

Test Product: FWS-810

Test Site: AAEON QA Internal Lab.

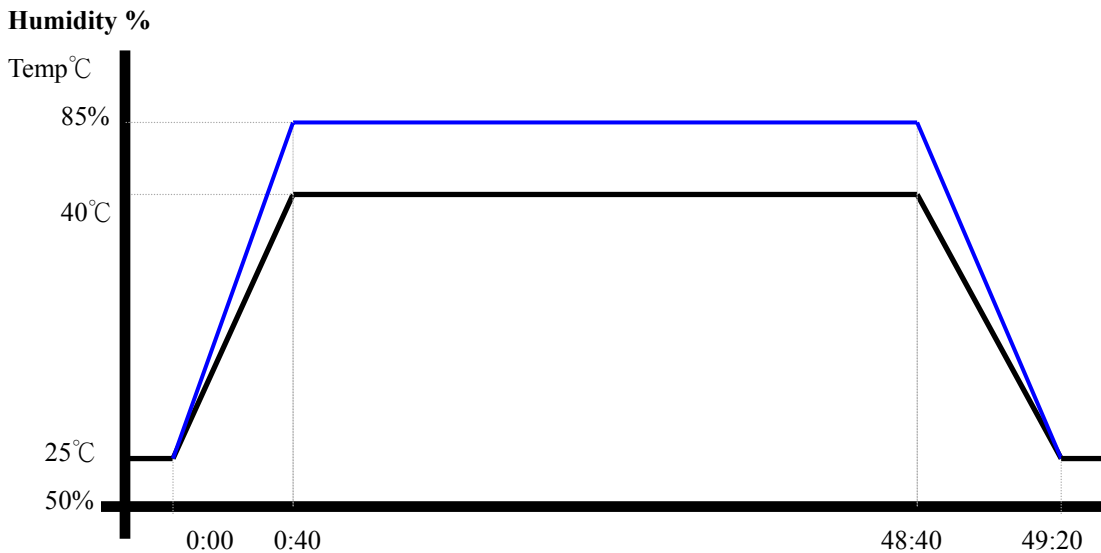
Performed By: Sean Hsu

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: 12/14/05
Serial Number: 3898

Testing Item:

1. Test Temperature: 40°C
2. Test Humidity: 85%RH
3. Test Times: 48Hrs
4. Test Software: Windows 2000 / Run PassMark Burn In Test Pro 4.0
5. Test Environment Curve:



Sample Configuration & Quantity Under Test:
Quantity: 1 (FWS-810)

Test Result:
No problem was found after the humidity test.

Hot Start test

Test Date: 01-18-2007

Test Product: FWS-810

Test Site: AAEON QA Internal Lab.

Performed By: Sean Hsu

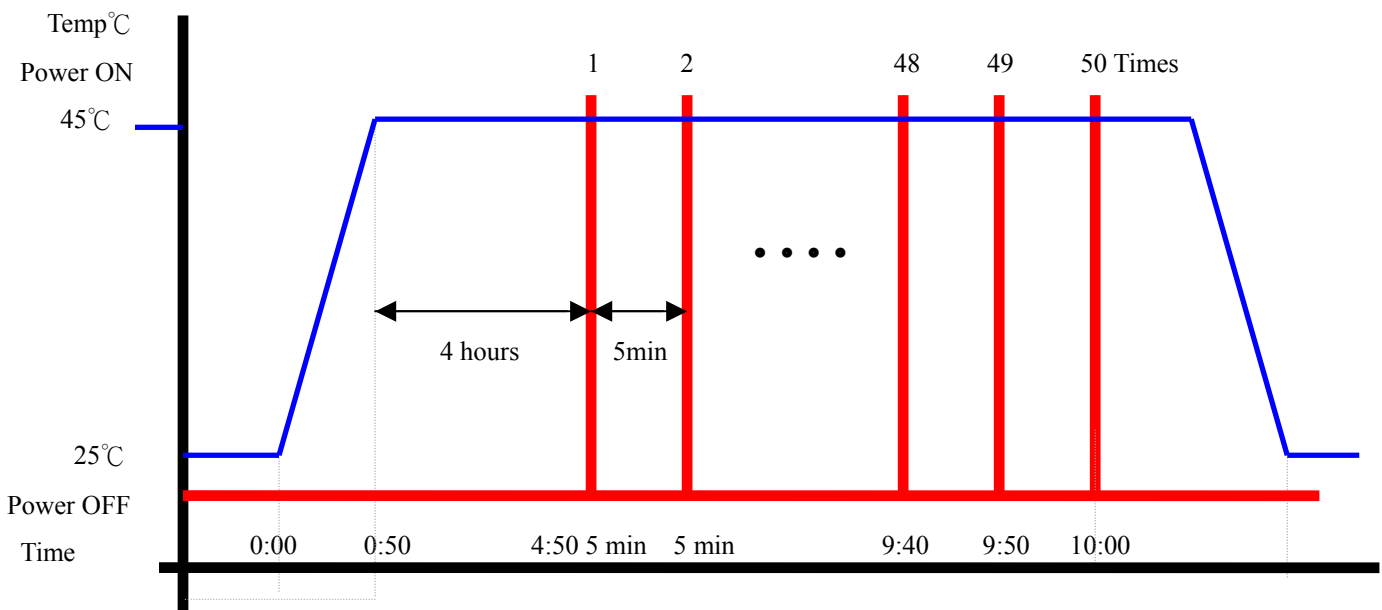
Test Standard: Reference IEC 68-2-2 Testing procedures
Test Bb: Dry Heat Test

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D7S-100+1 N2
Date of Calibration: 12/14/05
Serial Number: 3898

Test Condition:

1. Test Temperature: 45°C
2. Test Times: 5 Hours or 50 times of ON/OFF
 - (1) Power off for 4 hours after 1st power on. Then once complete boot, power off immediately.
 - (2) After 5 min later power on again and wait until booting is completed.
 - (3) Repeat (2) for around 4:50
 - (4) Power off then wait for 5 min before final power on operation.
3. Number of test: 50 times
4. Test Software: Windows 2000
5. Test Environment Curve:



Cold Start test

Test Date: 01-19-2007

Test Product: FWS-810

Test Site: AAEON QA Internal Lab.

Performed By: Sean Hsu

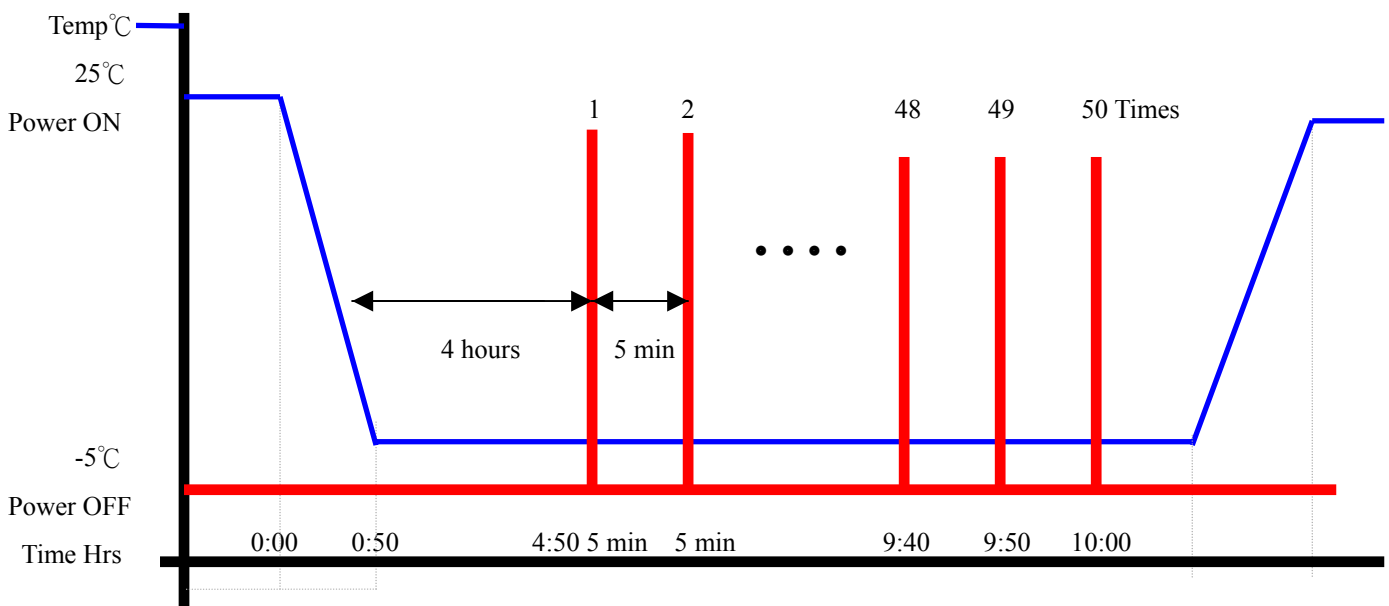
Test Standard: Reference IEC 68-2-1 Testing procedures
Test Ab: Cold Test

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D7S-100+1 N2
Date of Calibration: 12/14/05
Serial Number: 3898

Test Condition:

1. Test Temperature: -5°C
2. Test Times: 5 Hours or 50 times of ON/OFF
 - (5) Power off for 4 hours after 1'st power on. Then once complete boot, power off immediately.
 - (6) After 5 min later power on again and wait until booting is completed.
 - (7) Repeat (2) for around 4:50
 - (8) Power off then wait for 5 min before final power on operation.
3. Number of test: 50 times
4. Test Software: Windows 2000
5. Test Environment Curve:



Sample Configuration & Quantity Under Test:

Quantity: 1 (FWS-810)

Test Result:

No problem was found during the cold start test.