



*Industrial Computing Platform Partner*

# **FWS-825 (FWB-880N)**

**With 3.5" HDD**

## **Environment Test Report**

**Report NO: 05I020014**

Issued by: **Rex-Chang** / **10/07/2005**  
\_\_\_\_\_  
Test Engineer Date

Reviewed by: **Wenyuan Yang** / **10/07/2005**  
\_\_\_\_\_  
Manager Date

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## Test Configuration:

Num	Item	Spec
1.	Control Box:	FWS-825 / 2U 6 LAN Port Rack Mount Firewall Chassis
	1. Main Board	AAEON FWS-880 A0.2 (BIOS: 1.0)
	2. CPU	Intel Pentium 4 / 3.8GHz (FSB: 800)
	3. Memory	1GB Kingmax ELPIDA E5108AB-5C-E (DDR2-533) * 2 1GB Kingmax Hynix HY5PS12821 F-C4 (DDR2-533) * 2
	4. Ethernet Daughterboard	PER-C102 A1.0
	5. Ethernet Daughterboard	PER-C102 A1.0
	6. Ethernet Daughterboard	PER-C102 A1.0
	7. Power Supply	Seventeam ST-352UAG-05E / 350W (ATX)
	8. SATA HDD	Western Digital WD800 / 80GB

### CPU Cooler



**Test Date:** 09-26~29-2005

**Test Product:** FWS-825 (FWB-880N A0.2).

**Test Site:** AAEON QA Internal Lab.

**Performed By:** Rex Chang

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

**Test Equipment:**

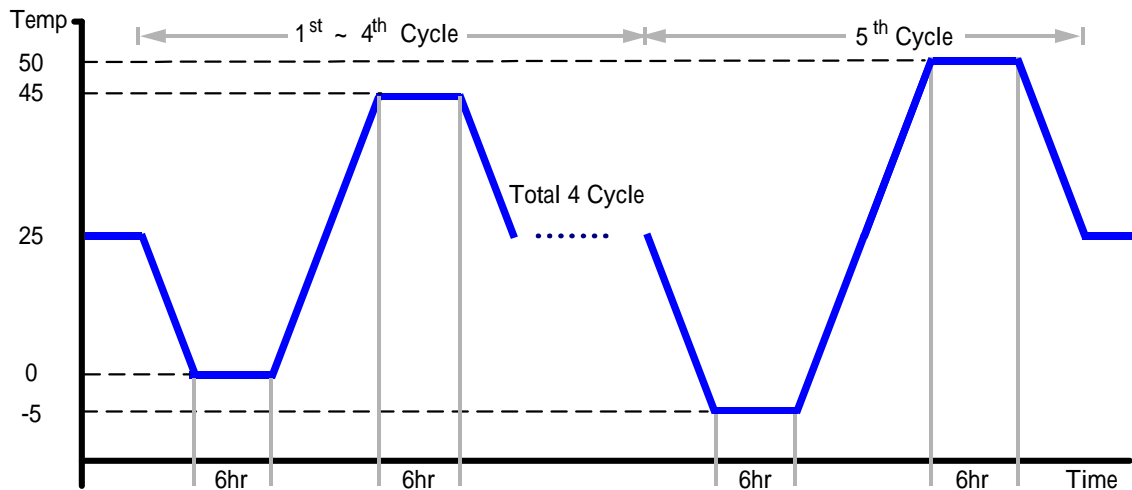
Programmable Temperature & Humidity Chamber  
K.SON. INS. TECH. CORP.  
Model: THS-D4H+-100  
Date of Calibration: 05/23/05  
Serial Number: 1241

**Temperature Measurement:**

20 Channel Thermal Recorder:  
YOKOGAWA Inc,  
Model: DA100-13-1D  
Date of Calibration: 12/25/04  
Serial Number: 12A323190

**Test Condition:**

1. Test Low Temperature: 0 (1~4 cycle)  
-5 (5<sup>th</sup> cycle)
2. Test High Temperature: 45 (1~4 cycle)  
50 (5<sup>th</sup> cycle)
3. Test dwell time: 6Hrs
4. Temperature slope: 1 /min
5. Test cycle: 5 cycle
6. Test Environment Curve:



**Test O.S. / Software:**

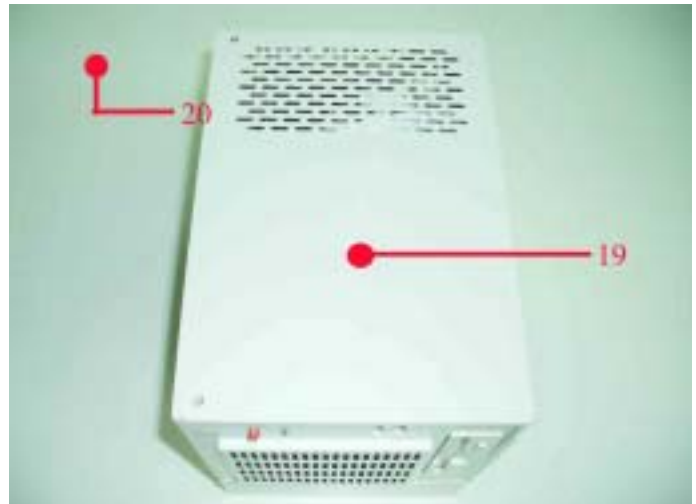
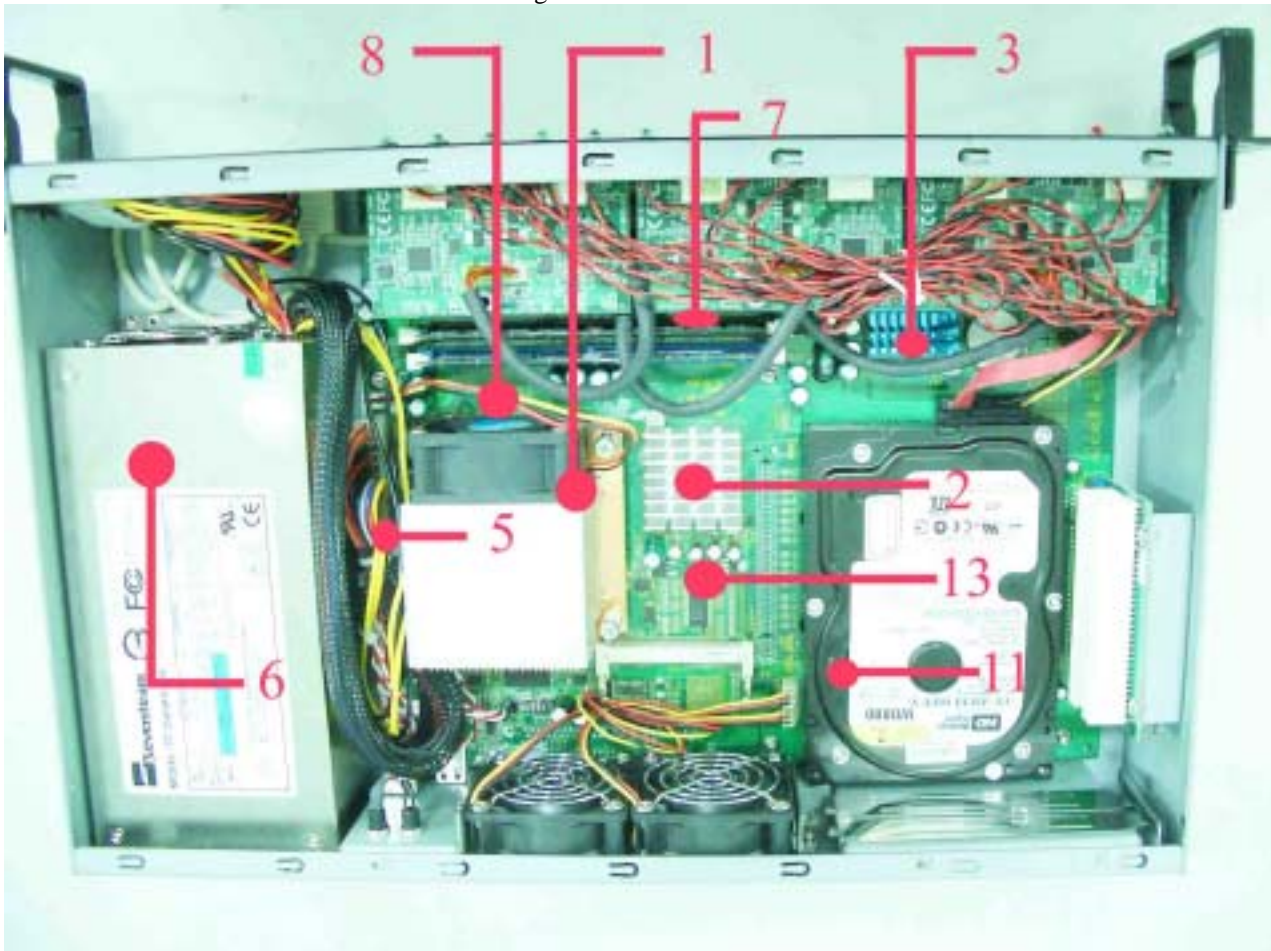
Windows 2000 / Run PassMark Burn In Test Pro 4.0

**Sample Configuration & Quantity Under Test:**

Using one FWS-825 (FWB-880N A0.2) 2U 6 LAN Port Rack Mount Firewall Server.

**Temperature Recorder:**

Measuring Accelerometer Position:





**Thermal profile data:**

**FWS-825 (FWB-880N A0.2)**

Point	Temp. Stage( )	Spec	50	45	25	0	-5
1. CPU1 - CPU Surface		70.8	65.4	60.4	40.4	15.4	10.4
2. U18 - LAKEPORT 945G.INTEL.QG82945G SL8FU A2 Heat Sink Surface		99	65.7	60.7	40.7	15.7	10.7
3. U22 - ICH7R.INTEL.NH82801GR SL8FY A1 Heat Sink Surface		99	78.2	73.2	53.2	28.2	23.2
4. L5 - (TF)COIL.0.6uH.DIP Wire Size 1.1*2mm.2wire 35.TRIO.PSG-1410-R60M1		85	96.7	91.7	71.7	46.7	41.7
5. L14 - (TF)COIL.0.6uH.DIP Wire Size 1.1*2mm.2wire 35.TRIO.PSG-1410-R60M1		85	105.1	100.1	80.1	55.1	50.1
6. Power Supply		125	59.8	54.8	34.8	9.8	4.8
7. Memory		125	59.2	54.2	34.2	9.2	4.2
8. Control Box Inside Air Temperature - 1		N/A	57.2	52.2	32.2	7.2	2.2
9. Control Box Inside Air Temperature - 2		N/A	70.3	65.3	45.3	20.3	15.3
10. Control Box Inside Air Temperature -3		N/A	52.1	47.1	27.1	2.1	-2.9
11. HDD Surface		55	60.4	55.4	35.4	10.4	5.4
12. Control Box Inside Air Temperature - 4		N/A	62.4	57.4	37.4	12.4	7.4
13. Control Box Inside Air Temperature - 5		N/A	58.7	53.7	33.7	8.7	3.7
14. Chamber Air Temperature		N/A	52.2	47.2	27.2	2.2	-2.8

**Note:** The description in red states which temperature is over the specification of the device.

**Sample Configuration & Quantity Under Test:**

Quantity: 1 (FWS-825 / 2U 6 LAN Port Rack Mount Firewall Server)

**Test Result:**

The system structure doesn't deformation; Function is passed during system test.



**Test Date:** 08-23~25-2005

**Test Product:** FWS-825 (FWB-880N A0.2).

**Test Site:** AAEON QA Internal Lab.

**Performed By:** Rex Chang

**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: 12/28/04

Serial Number: 3898

**Testing Item:**

1. Test Temperature: 60
2. Test Times: 48Hrs
3. Test Software: Windows media Player (Video test soft-MPEG from HDD)
4. Test Environment Curve:



**Sample Configuration & Quantity Under Test:**

Quantity: 1 (FWS-825 / 2U 6 LAN Port Rack Mount Firewall Server)

**Test Result:**

The system structure doesn't have any deformation; All functions are passed after low temperature storage test.

**Test Date:** 08-26~29-2004

**Test Product:** FWS-825 / 2U 6 LAN Port Rack Mount Firewall Chassis

**Test Site:** AAEON QA Internal Lab.

**Performed By:** Rex Chang

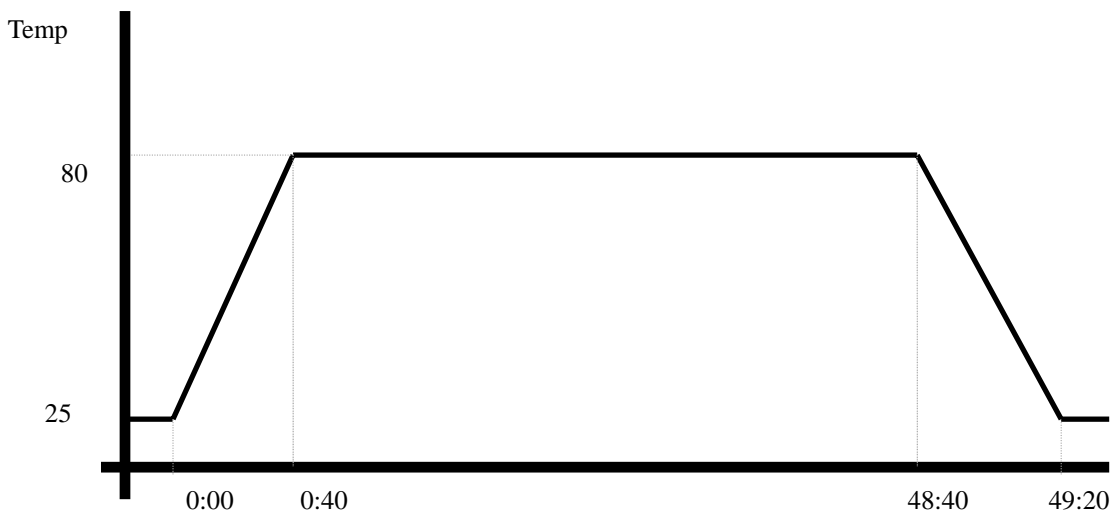
**Test Standard:** Reference IEC 68-2-2 Testing procedures  
Test Bb: Dry Heat Test (Non-operation)

**Test Equipment:**

Programmable Temperature & Humidity Chamber  
K.SON. INS. TECH. CORP.  
Model: THS-D7S-100+1 N2  
Date of Calibration: 12/28/04  
Serial Number: 3898

**Testing Item:**

- 5. Test Temperature: 80
- 6. Test Times: 48Hrs
- 7. Test Environment Curve:



**Sample Configuration & Quantity Under Test:**

Quantity: 1 (FWS-825 / 2U 6 LAN Port Rack Mount Firewall Chassis)

**Test Result:**

After high temperature storage test, the structure of chassis never change shape and surface paint doesn't flake off.

**Test Date:** 08-24~26-2005

**Test Product:** FWS-825 (FWB-880N A0.2)

**Test Site:** AAEON QA Internal Lab.

**Performed By:** Rex Chang

**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-D4L+-100  
Date of Calibration: 11/30/04  
Serial Number: 2582

**Testing Item:**

1. Test Temperature: -20
2. Test Times: 48Hrs
3. Test Software: Windows media Player (Video test soft-MPEG from HDD)
4. Test Environment Curve:



**Sample Configuration & Quantity Under Test:**

Quantity: 1 (FWS-825 / 2U 6 LAN Port Rack Mount Firewall Server)

**Test Result:**

The system structure doesn't have any deformation; All functions are passed after low temperature storage test.



**Test Date:** 04-29~05-01-2005

**Test Product:** FWS-825 (FWB-880N A0.2)

**Test Site:** AAEON QA Internal Lab.

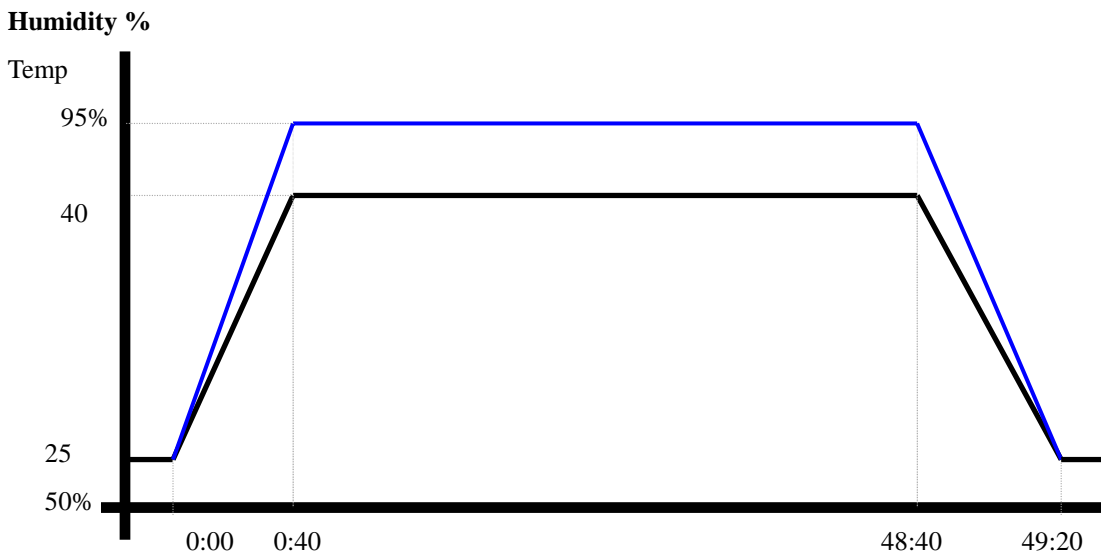
**Performed By:** Rex Chang

**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-D4L+-100  
Date of Calibration: 11/30/04  
Serial Number: 2582

**Testing Item:**

1. Test Temperature: 40
2. Test Humidity: 95%RH
3. Test Times: 48Hrs
4. Test Software: Windows media Player (Video test soft-MPEG from HDD)
5. Test Environment Curve:



**Sample Configuration & Quantity Under Test:**

Quantity: 1 (FWS-825 / 2U 6 LAN Port Rack Mount Firewall Server)

**Test Result:**

The system structure doesn't have any deformation; All functions are passed after humidity test.

**Test Date:** 09-29~30-2005

**Test Product:** FWS-825 (FWB-880N A0.2)

**Test Site:** AAEON QA Internal Lab.

**Performed By:** Rex Chang

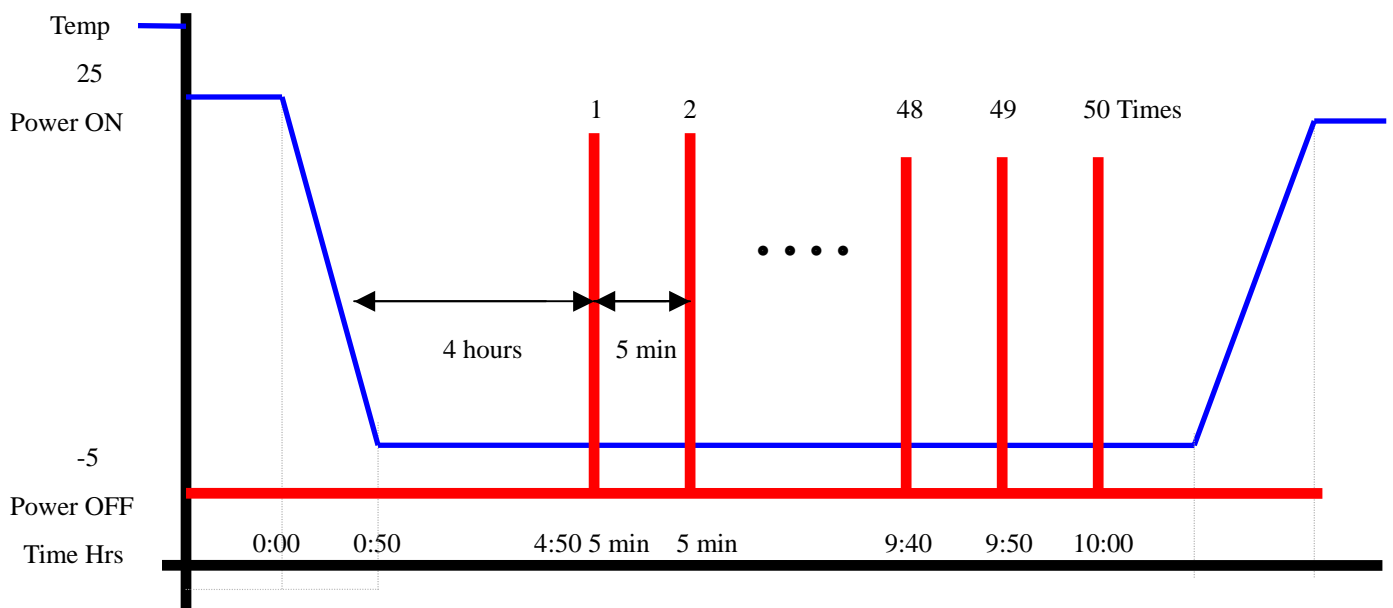
**Test Standard:** Reference IEC 68-2-1 Testing procedures  
Test Ab: Cold Test

**Test Equipment:**

Programmable Temperature & Humidity Chamber  
K.SON. INS. TECH. CORP.  
Model: THS-D4L+-100  
Date of Calibration: 11/30/04  
Serial Number: 2582

**Test Condition:**

1. Test Temperature: -5
2. Test Times: 5 Hours or 50 times of ON/OFF
  - (1) Power off for 4 hours before 1'st 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:



**Sample Configuration & Quantity Under Test:**

Quantity: 1 (FWS-825 / 2U 6 LAN Port Rack Mount Firewall Server)

**Test Result:**

**Passed.**