FWA-6510
Memory Compatibility
Test Report

Version 1.0

CFD-A			DQA		
Approved by			**Approved by**	20-Jun-2012	David. Huang

1. *MEMORY COMPATIBILITY TEST*

1.01 Memory Compatibility

Test Date: 2011/07/22, 2012/01/13, 2011/01/19, 2012/02/01, 2012/03/13, 2012/04/02
Test Site: Advantech DQA
Performed by: Jenny Lin, Fresh Yang

1.01.1.01 Test Purpose

Evaluate whether functions are working well in different memory combinations and maintained in a stable condition

1.01.1.02 Test Standard:

Please refer to the following documents:
A-01.NAMB-6510MB_A102_ORCAD_PDF_110601
A-02.FWA-6510_HWDesignSpec_Rev001_20110328

1.01.1.03 Test Equipment:

1. USB Keyboard/Mouse
2. USB Floppy: MITSUMI D353FUE

1.01.1.04 Sample Configuration & Quantity Under Test:

Configuration:	A	B
1. MB rev.	NAMB-6510 A102-1	NAMB-6510 A103-1
-P/N:	19A2651001	19A2651002
-S/N:	ESE0082919	AKS0041252
-CPU:	Intel (R) Genuine QA80 1.40GHz	Intel (R) Xeon E5-2658 2.1GHz
-Memory:	See Table 4.02.1	See Table 4.02.3
-BIOS Rev.	FWA6510 X030	FWA6510 X063
2. Other Board Rev.	NAMB-4208S SATA/SAS HDD4-BP A101-1 NAMB-6510 MGT A101-1 NAMB-6501 CON A102-1	NAMB-4208S SATA/SAS HDD4-BP A101-1 NAMB-6510 MGT A101-1 NAMB-6501 CON A102-1
3. Power Supply:	3Y Power Technology 720W (YH-5721A B06R)	3Y Power Technology 720W (YH-5721A B06R)

1.01.1.05 Test Condition:

1. Test environment: Room temperature
2. Test software: Memtest 86+ rev.4.20
3. OS: Linux of memtest86+

1.01.1.06 Test procedure:

1. Turn on the power.
2. Setting the boot device to USB floppy in BIOS.
3. Save and exit then reboot
4. Run Memtest86+ test program from USB floppy disk
5. Using Memtest 86+ to get type/frequency/capacity
6. Using Memtest 86+ to test for three loops to ensure design meets spec.

1.01.1.07 Test Data:
Configuration: A.

Table 4.02.1 Memory Compatibility combination table

Memory Vendor & Type	Criteria			Measurement			Judgment
	Frequency	Total Capacity	System On/Off Check	Frequency	Total Capacity	System On/Off Check	
ATP 4GB DDR3-1333 REG ECC x12 (AL12M72B8BKH9S)	1333 MHz	49152 MB	All memory shall be detected on every boot up time (500 times)	1333 MHz	49152 MB	PASS	PASS
ATP 4GB DDR3-1600 REG ECC x12 (AL12M72B8BKK0S)	1600 MHz	49152 MB		1600 MHz	49152 MB	PASS	PASS

Table 4.02.2 Memtest86+ result check

Memory Vendor & Type	Criteria	Measurement	Judgment
Transcend 8GB DDR3 1333 REG-D CL9 x12	There shall be no error during 3 Loops test.	PASS	PASS
ATP 4GB DDR3-1333 REG ECC x12 (AL12M72B8BKH9S)		PASS	PASS

Configuration: B.

Table 4.02.3 Memory Compatibility combination table

Memory Vendor & Type	Criteria			Measurement			Judgment
	Frequency	Total Capacity	System On/Off Check	Frequency	Total Capacity	System On/Off Check	
Transcend 8GB DDR3 1333 REG-D CL9 x12	800MHz	98304 MB	All memory shall be detected on every boot up time (500 times)	800MHz	98304 MB	PASS	PASS
Apacer 4GB ECC REG PC3-10600 CL9 x12 (S/N: 201132300052)	1333 MHz	49152 MB		1333 MHz	49152 MB	PASS	PASS
ATP 16GB DDR3L-1600 ECC REG (XL16E4E16SOPNB-AV)	1333 MHz	196608MB		1333MHz	196608MB	PASS	PASS
Virtium VL33B2K60A-K0S 16GB x12	1600MHz	196608MB		1600MHz	196608MB	PASS	PASS
Transcend 2GB DDR3 1333 REG DIMM CL9 x12	1333 MHz	24576MB		1333 MHz	24576MB	PASS	PASS
ATP 16GB DDR3-1600 ECC REG (VL1600E472/16)	1600MHz	196608MB		1600MHz	196608MB	PASS	PASS

Table 4.02.4 Memtest86+ result check

Memory Vendor & Type	Criteria	Measurement	Judgment
ATP 4GB DDR3-1600 REG ECC x12 (AL12M72B8BKK0S)	There shall be no error during 3 Loops test.	PASS	PASS
Apacer 4GB ECC REG PC3-10600 CL9 x12 (S/N: 201132300052)		PASS	PASS
ATP 16GB DDR3L-1600 ECC REG (XL16E4E16SOPNB-AV)		PASS	PASS
Virtium VL33B2K60A-K0S 16GB x12		PASS	PASS
Transcend 2GB DDR3 1333 REG DIMM CL9 x12		PASS	PASS
ATP 16GB DDR3-1600 ECC REG (VL1600E472/16)		PASS	PASS

1.01.1.08 Evaluation Criteria:

1. There should be no abnormalities affecting the specified functions and performance.
2. The memory size shown on the BIOS setup menu should be the same as the installed memory modules.
3. The test program should run successfully without any error.

1.01.1.09 Test Result:

PASS

1.01.1.10 Conclusion:

PASS

2. REFERENCE

A-01	NAMB-6510MB_A102_ORCAD_PDF_110601
A-02	FWA-6510_HWDesignSpec_Rev001_20110328