

# 1. Stability Test: Rev.021

## 1.1 CPU Test:

### Procedure:

- (1) Install O.S.
- (2) Check CPU information & specification with CPU-Z.
- (3) Run 3DMark11 Demo Edition Ver.1.0.5 Benchmark - 3 times.
- (4) Run AIDA64 Cache and Memory Benchmark Ver.4.00.2700 - 1 time.
- (5) Check CPU temperature in the BIOS after running 3DMark.
- (6) Run S3/S4/S5 - 3 times.

No.	CPU	Type	CPU Temp.	Result
1	Intel / 2.7GHz	Core i5-4400E (Haswell/SR17M) / 37W / FCBGA1364	47 °C	Pass
2	Intel / 2.4GHz	Core i3-4100E (Haswell/SR17N) / 37W / FCBGA1364	45 °C	Pass
3	Intel / 1.6GHz	Core i3-4102E (Haswell/SR17R) / 25W / FCBGA1364	38 °C	Pass

## 1.2 DDR3 SO-DIMM Approved:

No.	Brand	Chip	Size	Type	Chip Model No.	Vendor Part No.	Result
1	Apacer	Micron	8GB	PC3-12800 (DDR3L-1600)	2ED27-D9PCP	75.C93DL.G000C 1.35V/1.5V [512Mx8b-x16/1024Mx64b,CL=11]	Pass
2	Crucial	Micron	8GB	PC3-12800 (DDR3L-1600)	2RD27D9PCP	CT102464BF160B.16FDD (MT16KTF1G64HZ-1G6D1) 1.35/1.5V [512Mx8b-x16/1024Mx64b,CL=11-11-11-30]	Pass
3	ADATA	Micron	8GB	PC3L-12800 (DDR3L-1600)	3DE77D9Q8J	ADDS1600W8G11-BMIE (10281788) 1.35V/1.5V [512Mx8b-x16/1GBx64b,CL=11-11-11]	Pass
4	INNODISK	Micron	4GB	PC3-12800 (DDR3L-1600)	1XM77-D9PFJ	M3SP-4GMJDLOC-M 1.35V/1.5V [256Mx8b-x16/512Mx64b,CL=9]	Pass
5	Apacer	Micron	4GB	PC3-12800 (DDR3L-1600)	2DM77-D9PFJ	75.B83DL.G000C 1.35V/1.5V [256Mx8b-x16/512Mx64b,CL=11]	Pass
6	Crucial	Micron	4GB	PC3-12800 (DDR3L-1600)	2RM77D9PFJ	CT51264BF160B.16FMR (MT16KTF51264HZ-1G6M1) 1.35V/1.35V [256Mx8b-x16/512Mx64b,CL=11-11-11-30]	Pass

No.	Brand	Chip	Size	Type	Chip Model No.	Vendor Part No.	Result
7	ADATA	Micron	4GB	PC3L-12800 (DDR3L-1600)	3DE77D9Q8J	ADDS1600W4G11-BMIE (10281820) 1.35V/1.5V [512Mx8b-x8/512Mx64b,CL=11-11-11]	Pass
8	INNODISK	Micron	2GB	PC3-12800 (DDR3L-1600)	1WM77-D9PFJ	M3SP-2GMJCL0C-M 1.35V/1.5V [256Mx8b-x8/256Mx64b,CL=9]	Pass
9	ADATA	Hynix(SK)	2GB	PC3L-12800 (DDR3L-1600)	H5TC2G83EFR PBA	ADDS1600C2G11-BHYE (10281881) 1.35V/1.5V [256Mx8b-x8/256Mx64b,CL=11-11-11]	Pass
10	Apacer	ELPIDA	4GB	PC3-10600 (DDR3L-1333)	J2108ECSE-DJ-F	78.B2GCL4210C 1.35V [256Mx8b-x16/512Mx64b,CL=9]	Pass
11	Transcend	Hynix	4GB	PC3-10600 (DDR3L-1333)	H5TQ2G83BFR-H9C	TS512MSK64W3N 1.35V/1.5V [256Mx8b-x16/512Mx64b,CL=9]	Pass
12	Apacer	ELPIDA	2GB	PC3-10600 (DDR3L-1333)	J2108ECSE-DJ-F	78.A2GCL4200C 1.35V [256Mx8b-x8/256Mx64b,CL=9]	Pass
13	Transcend	Hynix	2GB	PC3-10600 (DDR3L-1333)	H5TQ2G83BFR-H9C	TS256MSK64W3N 1.35V/1.5V [256Mx8b-x8/256Mx64b,CL=9]	Pass
14	Crucial	Micron	2GB	PC3L-10600 (DDR3L-1333)	2EM77D9PFJ	CT25664BF1339.8FMR (MT8KTF25664HZ-1G4M1) 1.35V/1.5V [56Mx8b-x8/256Mx64b,CL=9]	Pass

### 1.3 DDR3 SO-DIMM Test Procedures:

**Procedure:**

- (1) Install O.S.
- (2) Check CPU information & specification with CPU-Z.
- (3) Run 3DMark11 Demo Edition Ver.1.0.5 Benchmark - 3 times.
- (4) Run AIDA64 Cache and Memory Benchmark Ver.4.00.2700 - 1 time.
- (5) Run S3/S4/S5 - 3 times.

No.	DDR3 Module	Test Environment	Result
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<b>1</b>	<p>Apacer (75.C93DL.G000C 1.35V/1.5V) [512Mx8b-x16/1024Mx64b,CL=11] / Micron (2ED27-D9PCP) / PC3-12800 (DDR3L-1600) / 8GB *2</p>	<p>M/B: HM100-QM87D-4100E Rev.2 (021) (BSD470800001) EC FW Rev.: 2013/10/28 v1.2 M/B BIOS: AMI-Aptio 12/05/2013 M/B Driver: Demo Dec/10/2013 CPU: Intel / Core i3-4100E (Haswell) / 2.4GHz DIMM Slot: DIMM-1/2 (Dual channel) SATA HDD: WD / WD3200YS SATA2 NCQ 320GB/7200RPM Display: On Board DVD-RW: Archgon / MD-3107-U3 USB3.0Port 0 Power: Jagier / KY-580ATX 480W O.S.: Windows 8 Enterprise 64Bit (English) Test Summary: 1.3DMark Score:P758 2.AIDA64 Cache and Memory Benchmark: READ:21655MB/s WRITE:24960MB/S COPY:22687MB/s</p>	<b>Pass</b>
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No.	DDR3 Module	Test Environment	Result
2	Crucial (CT102464BF160B.16FDD (MT16KTF1G64HZ-1G6D1) 1.35V/1.5V) [512Mx8b-x16/1024Mx64b, CL=11-11-11-30] / Micron (2RD27D9PCP) / PC3-12800 (DDR3L-1600) / 8GB *1	M/B: HM100-QM87D-4400E Rev.2 (021) (BSD470700002) EC FW Rev.: 2013/10/28 v1.2 M/B BIOS: AMI-Aptio 12/05/2013 M/B Driver: Demo Dec/10/2013 CPU: Intel / Core i5-4400E (Haswell) / 2.7GHz DIMM Slot: DIMM-1 (Single channel) SATA HDD: WD / WD3200YS SATA2 NCQ 320GB/7200RPM Display: On Board DVD-RW: Archgon / MD-3107-U3 USB3.0 Power: Jagier / KY-580ATX 480W O.S.: Windows 7 Ultimate 64Bit (English) & SP1 Test Summary: 1.3DMark11 Score :P716 2.AIDA64 Cache and Memory Benchmark: READ:12276MB/s WRITE:12518MB/S COPY:11956MB/s 3.Overnight looping under 12 hours	Pass
3	ADATA (ADDS1600W8G11-BMIE (10281788) 1.35V/1.5V) [512Mx8b-x16/1GBx64b,CL=11-11-11] / Micron (3DE77D9Q8J) / PC3L-12800 (DDR3L-1600) / 8GB *2	M/B: HM101-QM87D-4102E Rev.2 (021) (BSD471200001) EC FW Rev.: 2013/10/28 v1.2 M/B BIOS: AMI-Aptio 12/05/2013 M/B Driver: Demo Dec/10/2013 CPU: Intel / Core i3-4102E (Haswell) / 1.6GHz DIMM Slot: DIMM-1/2 (Dual channel) SATA HDD: WD / WD360ADFD SATA1 NCQ 36GB/10000RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Jagier / KY-580ATX 480W O.S.: Windows 8 Enterprise 64Bit (English) Test Summary: 1.3DMark11 Score:P723 2.AIDA64 Cache and Memory Benchmark: READ:18208 WRITE:18557 COPY:20356	Pass

<p style="text-align: center;"><b>4</b></p>	<p>INNODISK (M3SP-4GMJDL0C-M 1.35V/1.5V) [256Mx8b-x16/512Mx64b,CL=9] / Micron (1XM77-D9PFJ) / PC3-12800 (DDR3L-1600) / 4GB *2</p>	<p>M/B: HM103-HM86D-4102E Rev.2 (021) (BSD472200001) EC FW Rev.: 2013/10/28 v1.2 M/B BIOS: AMI-Aptio 12/05/2013 M/B Driver: Demo Dec/10/2013 CPU: Intel / Core i3-4102E (Haswell) / 1.6GHz DIMM Slot: DIMM-1/2 (Dual channel) SATA HDD: WD / WD360ADFD SATA1 NCQ 36GB/10000RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: EDAC / EA11001F-190 O.S.: Windows 8 Enterprise 64Bit (English) Test Summary: 1.3DMark11 Score:P732 2.AIDA64 Cache and Memory Benchmark: READ:17984MB/s WRITE:18555MB/s COPY:20638MB/s</p>	<p style="text-align: center;"><b>Pass</b></p>
<p style="text-align: center;"><b>5</b></p>	<p>Apacer (75.B83DL.G000C 1.35V/1.5V) [256Mx8b-x16/512Mx64b,CL=11] / Micron (2DM77-D9PFJ) / PC3-12800 (DDR3L-1600) / 4GB *2</p>	<p>M/B: HM101-HM86D-4102E Rev.2 (021) (BSD471500001) EC FW Rev.: 2013/10/28 v1.2 M/B BIOS: AMI-Aptio 12/05/2013 M/B Driver: Demo Dec/10/2013 CPU: Intel / Core i3-4102E (Haswell) / 1.6GHz DIMM Slot: DIMM-1/2 (Dual channel) SATA HDD: WD / WD2500BEVT-22ZCT0 SATA2 NCQ 250GB/5400RPM/2.5" Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 8 Enterprise 64Bit (English) Test Summary: 1.3DMark11 Score:P735 2.AIDA64 Cache and Memory Benchmark: READ:18057MB/s WRITE:18555MB/s COPY:20525MB/s</p>	<p style="text-align: center;"><b>Pass</b></p>

No.	DDR3 Module	Test Environment	Result
6	Crucial (CT51264BF160B.16FMR (MT16KTF51264HZ-1G6M1) 1.35V/1.5V) [256Mx8b-x16/512Mx64b,CL=11-11-11-30] / Micron (2RM77D9PFJ) / PC3-12800 (DDR3L-1600) / 4GB *1	M/B: HM103-QM87D-4400E Rev.2 (021) (BSD471800001) EC FW Rev.: 2013/10/28 v1.2 M/B BIOS: AMI-Aptio 12/05/2013 M/B Driver: Demo Dec/10/2013 CPU: Intel / Core i5-4400E (Haswell) / 2.7GHz DIMM Slot: DIMM-2 (Single channel) SATA HDD: WD / WD2500BEVT-22ZCT0 SATA2 NCQ 250GB/5400RPM/2.5" Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: EDAC / EA11001F-190 O.S.: Windows 7 Ultimate 64Bit (English) & SP1 Test Summary: 1.3DMark11 Score:P720 2.AIDA64 Cache and Memory Benchmark: READ:12252MB/s WRITE:12448MB/s COPY:1236MB/s 3.Overnight looping under 12 hours	Pass
7	ADATA (ADDS1600W4G11-BMIE (10281820) 1.35V/1.5V) [512Mx8b-x8/512Mx64b,CL=11-11-11] / Micron (3DE77D9Q8J) / PC3L-12800 (DDR3L-1600) / 4GB *1	M/B: HM100-QM87D-4400E Rev.2 (021) (BSD470700002) EC FW Rev.: 2013/10/28 v1.2 M/B BIOS: AMI-Aptio 12/05/2013 M/B Driver: Demo Dec/10/2013 CPU: Intel / Core i5-4400E (Haswell) / 2.7GHz DIMM Slot: DIMM-2 (Single channel) SATA HDD: WD / WD15EADS-00R6B0 SATA2 NCQ 1.5TB/7200RPM (AHCI mode) Display: On Board DVD-RW: Archgon / MD-3107-U3 USB3.0 Power: Jagier / KY-580ATX 480W O.S.: Windows 8 Enterprise 32Bit (English) Test Summary: 1.3DMark11 Score:P684 2.AIDA64 Cache and Memory Benchmark: READ:11899MB/s WRITE:11975MB/S COPY:11250MB/s	Pass

<b>8</b>	<p>INNODISK (M3SP-2GMJCL0C-M 1.35V/1.5V) [256Mx8b-x8/256Mx64b,CL=9] / Micron (1WM77-D9PFJ) / PC3-12800 (DDR3L-1600) / 2GB *1</p>	<p>M/B: HM101-QM87D-4102E Rev.2 (021) (BSD471200001) EC FW Rev.: 2013/10/28 v1.2 M/B BIOS: AMI-Aptio 12/05/2013 M/B Driver: Demo Dec/10/2013 CPU: Intel / Core i3-4102E (Haswell) / 1.6GHz DIMM Slot: DIMM-1 (Single channel) SATA HDD: WD / WD360ADFD SATA1 NCQ 36GB/10000RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 7 Ultimate 32Bit (English) &amp; SP1 Test Summary: 1.3DMark11 Score:P629 2.AIDA64 Cache and Memory Benchmark: READ:11979MB/s WRITE:12067MB/s COPY:11537MB/s 3.Overnight looping under 11 hours</p>	<b>Pass</b>
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No.	DDR3 Module	Test Environment	Result
<b>9</b>	ADATA (ADDS1600C2G11-BHYE (10281881) 1.35V/1.5V) [256Mx8b-x8/256Mx64b,CL=11-11-11] / Hynix(SK) (H5TC2G83EFR PBA) / PC3L-12800(DDR3L-1600) / 2GB *2	M/B: HM100-QM87D-4400E Rev.2 (021) (BSD470700002) EC FW Rev.: 2013/10/28 v1.2 M/B BIOS: AMI-Aptio 12/05/2013 M/B Driver: Demo Dec/10/2013 CPU: Intel / Core i5-4400E (Haswell) / 2.7GHz DIMM Slot: DIMM-1/2 (Dual channel) SATA HDD: WD / WD5000AAKS SATA2 NCQ 500GB/7200RPM (AHCI mode) Display: On Board DVD-RW: Archgon / MD-3107-U3 USB3.0Port 5 Power: Jagier / KY-580ATX 480W O.S.: Windows 7 Ultimate 32Bit (English) & SP1 Test Summary: 1.3DMark11 Score:P793 2.AIDA64 Cache and Memory Benchmark: READ:223010MB/s WRITE:23410MB/S COPY:20903MB/s	<b>Pass</b>
<b>10</b>	Apacer (78.B2GCL4210C 1.35V) [256Mx8b-x16/512Mx64b,CL=9] / ELPIDA (J2108ECSE-DJ-F) / PC3-10600 (DDR3L-1333) / 4GB *2	M/B: HM101-HM86D-4102E Rev.2 (021) (BSD471500001) EC FW Rev.: 2013/10/28 v1.2 M/B BIOS: AMI-Aptio 12/05/2013 M/B Driver: Demo Dec/10/2013 CPU: Intel / Core i3-4102E (Haswell) / 1.6GHz DIMM Slot: DIMM-1/2 (Dual channel) SATA HDD: Hitachi / HDS722020ALA330 SATA2 NCQ 2TB/7200RPM (AHCI mode) Display: On Board DVD-RW: Archgon / MD-3107-U3 USB3.0 (USB port 8) Power: Delta / GPS-500BB 500W O.S.: Windows 7 Ultimate 64Bit (English) & SP1 Test Summary: 1.3DMark11 Score:P721 2.AIDA64 Cache and Memory Benchmark: READ:16887MB/s WRITE:18553MB/s COPY:18571MB/s	<b>Pass</b>



<b>11</b>	<p>Transcend (TS512MSK64W3N 1.35V/1.5V) [256Mx8b-x16/512Mx64b,CL=9] / Hynix (H5TQ2G83BFR-H9C) / PC3-10600 (DDR3L-1333) / 4GB *1</p>	<p>M/B: HM103-QM87D-4400E Rev.2 (021) (BSD471800001) EC FW Rev.: 2013/10/28 v1.2 M/B BIOS: AMI-Aptio 12/05/2013 M/B Driver: Demo Dec/10/2013 CPU: Intel / Core i5-4400E (Haswell) / 2.7GHz DIMM Slot: DIMM-2 (Single channel) SATA HDD: Maxtor / STM3320614AS SATA2 NCQ 320GB/7200RPM (AHCI mode) Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: EDAC / EA11001F-190 O.S.: Windows 8 Enterprise 32Bit (English) Test Summary: 1.3DMark11 Score:P675 2.AIDA64 Cache and Memory Benchmark:  READ:10279MB/s WRITE:10473MB/s COPY:10348MB/s</p>	<b>Pass</b>
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No.	DDR3 Module	Test Environment	Result
12	Apacer (78.A2GCL4200C 1.35V) [256Mx8b-x8/256Mx64b,CL=9] / ELPIDA (J2108ECSE-DJ-F) / PC3-10600 (DDR3L-1333) / 2GB *2	M/B: HM101-HM86D-4102E Rev.2 (021) (BSD471500001) EC FW Rev.: 2013/10/28 v1.2 M/B BIOS: AMI-Aptio 12/05/2013 M/B Driver: Demo Dec/10/2013 CPU: Intel / Core i3-4102E (Haswell) / 1.6GHz DIMM Slot: DIMM-1/2 (Dual channel) SSD: Intel / SSDSC2CW120A3K5 SATA3 120GB/2.5" Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 7 Ultimate 32Bit (English) & SP1 Test Summary: 1.3DMark11 Score:P685 2.AIDA64 Cache and Memory Benchmark: READ:16712MB/s WRITE:18475MB/s COPY:16784MB/s 3.Overnight looping under 11 hours	Pass
13	Transcend (TS256MSK64W3N 1.35V/1.5V) [256Mx8b-x8/256Mx64b,CL=9] / Hynix (H5TQ2G83BFR-H9C) / PC3-10600 (DDR3L-1333) / 2GB *2	M/B: HM100-QM87D-4100E Rev.2 (021) (BSD470800001) EC FW Rev.: 2013/10/28 v1.2 M/B BIOS: AMI-Aptio 12/05/2013 M/B Driver: Demo Dec/10/2013 CPU: Intel / Core i3-4100E (Haswell) / 2.4GHz DIMM Slot: DIMM-1/2 (Dual channel) SSD: Intel / SSDSC2CW120A3K5 SATA3 120GB/2.5" Display: On Board DVD-ROM: Pioneer / DVD-230DW 18X SATA Power: Jagier / KY-580ATX 480W O.S.: Windows 7 Ultimate 32Bit (English) & SP1 Test Summary: 1.3DMark11 Score:P702 2.AIDA64 Cache and Memory Benchmark: READ:18534MB/s WRITE:19253MB/S COPY:17551MB/s	Pass

<b>14</b>	<p>Crucial (CT25664BF1339.8FMR (MT8KTF25664HZ-1G4M1) 1.35V/1.5V) [256Mx8b-x8/256Mx64b,CL=9] / Micron (2EM77D9PFJ) / PC3L-10600 (DDR3L-1333) / 2GB *2</p>	<p>M/B: HM103-HM86D-4102E Rev.2 (021) (BSD472200001) EC FW Rev.: 2013/10/28 v1.2 M/B BIOS: AMI-Aptio 12/05/2013 M/B Driver: Demo Dec/10/2013 CPU: Intel / Core i3-4102E (Haswell) / 1.6GHz DIMM Slot: DIMM-1/2 (Dual channel) SSD: Intel / SSDSC2CW120A3K5 SATA3 120GB/2.5" Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: EDAC / EA11001F-190 O.S.: Windows 7 Ultimate 32Bit (English) &amp; SP1 Test Summary: 1.3DMark11 Score:P686 2.AIDA64 Cache and Memory Benchmark: READ:16760MB/s WRITE:18513MB/s COPY:16679MB/s</p>	<b>Pass</b>
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