

# 1. Stability Test: Rev.021/0A1

## 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) Check CPU temperature in the BIOS after running 3DMark.**
- (5) Run S3/S4/S5 - 3 times.**

No.	CPU	Type	CPU Temp.	Result
<b>1</b>	Intel / 3.1GHz	Core i7-4770S (Haswell/H3-QE73) / 65W / LGA1150	<b>45 °C</b>	<b>Pass</b>
<b>2</b>	Intel / 2.3GHz	Core i7-4770TE (Haswell/C0-SR183) / 45W / LGA1150	<b>30 °C</b>	<b>Pass</b>
<b>3</b>	Intel / 3.1GHz	Core i5-4670S (Haswell/H3-QE75) / 65W / LGA1150	<b>43 °C</b>	<b>Pass</b>
<b>4</b>	Intel / 2.7GHz	Core i5-4570TE (Haswell/C0-SR17Z) / 35W / LGA1150	<b>31 °C</b>	<b>Pass</b>
<b>5</b>	Intel / 2.9GHz	Core i5-4570S (Haswell/H3-QE74) / 65W / LGA1150	<b>40 °C</b>	<b>Pass</b>

## 1.2 DDR3 Module 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 S3/S4/S5 - 3 times.

No.	Brand	Chip	Size	Type	Chip Model No.	Vendor Part No.	Result
1	Transcend	Micron	8GB	PC3-12800 (DDR3-1600)	1ZD27-D9PBC/2CD27-D9PBC	TS1GLK64V6H 1.5V [512Mx8b-x16/1024Mx64b,CL=11]	Pass
2	Apacer	Micron	8GB	PC3-12800 (DDR3L-1600)	2ED27-D9PCP	75.C93DK.G000C 1.35V/1.5V [512Mx8b-x16/1024Mx64b,CL=11]	Pass
3	Crucial	Micron	8GB	PC3-12800 (DDR3L-1600)	2REI7D9QBJ	CT102464BD160B.16FED(MT16KTF1G64AZ-1G6E1) 1.35V/1.5V [512Mx8b-x16/1024Mx64b,CL=11-11-11-30]	Pass
4	Apacer	Hynix	4GB	PC3-12800 (DDR3-1600)	H5TQ2G83BFR PBC	78.B1GE3.AF10C 1.5V [256Mx8b-x16/512Mx64b,CL=11]	Pass
5	Hynix	Hynix	4GB	PC3-12800 (DDR3-1600)	H5TQ2G83BFR PBC	HMT351U6BFR8C-PBNO 1.5V [256Mx8b-x16/512Mx64b,CL=11]	Pass
6	Apacer	Hynix	4GB	PC3-12800 (DDR3-1600)	H5TC2G83EFR PBA	75.B83DE.G030C 1.5V [256Mx8b-x16/512Mx64b,CL=11]	Pass
7	INNODISK	Micron	4GB	PC3-12800 (DDR3L-1600)	1WM77-D9PFJ	M3UP-4GMJAL0C-M 1.35V/1.5V [256Mx8b-x16/512Mx64b,CL=9]	Pass

No.	Brand	Chip	Size	Type	Chip Model No.	Vendor Part No.	Result
8	Apacer	Micron	4GB	PC3-12800 (DDR3L-1600)	2DM77-D9PFJ	75.B83DK.G000C 1.35V/1.5V [256Mx8b-x16/512Mx64b,CL=11]	Pass
9	Hynix	Hynix	2GB	PC3-12800 (DDR3-1600)	H5TQ2G83BFR PBC	HMT325U6BFR8C-PBNO 1.5V [256Mx8b-x8/256Mx64b,CL=11]	Pass
10	Apacer	Hynix	2GB	PC3-12800 (DDR3-1600)	H5TC2G83EFR PBA	75.A83DE.G020C 1.5V [256Mx8b-x8/256Mx64b,CL=11]	Pass
11	INNODISK	Micron	2GB	PC3-12800 (DDR3L-1600)	1WM77-D9PFJ	M3UP-2GMJBL0C-M 1.35V/1.5V [256Mx8b-x8/256Mx64b,CL=9]	Pass
12	Transcend	Micron	8GB	PC3-10600 (DDR3-1333)	1ZD27-D9PBC/2CD27-DP9BC	TS1GLK64V3H 1.5V [512Mx8b-x16/1Gx64b,CL=9]	Pass
13	Transcend	SEC	4GB	PC3-10600 (DDR3-1333)	K4B2G0846D	TS512MLK64V3N 1.5V [256Mx8b-x16/512Mx64b,CL=9]	Pass
14	Transcend	Hynix	4GB	PC3-10600 (DDR3-1333)	H5TQ2G83CFR PBC	TS512MLK64V3N 1.5V [256Mx8b-x16/512Mx64b,CL=9]	Pass
15	Apacer	ELPIDA	4GB	PC3-10600 (DDR3L-1333)	J2108ECSE-DJ-F	78.B1GEG.4210C 1.35V [256Mx8b-x16/512Mx64b,CL=9]	Pass
16	Transcend	SEC	2GB	PC3-10600 (DDR3-1333)	K4B1G0846D	TS256MLK64V3U 1.5V [128Mx8b/256Mx64b,CL=7]	Pass
17	ADATA	ADATA	2GB	PC3-10600 (DDR3-1333)	AD30908C8D-151G	AD31333002GOU(AD631B16) 1.5V±0.75 [2GX16,CL=9]	Pass
18	Transcend	Transcend	2GB	PC3-10600 (DDR3-1333)	TK243WAF3	JM1333KLU-2G 1.5V [128Mx8b/256Mx64b,CL=9-9-9]	Pass
19	Elixir	Elixir	2GB	PC3-10600 (DDR3-1333)	M2Y2G64CB8HA9N-CG 1.5V	M2Y2G64CB8HA9N-CG 1.5V [256Mx64b,CL=9-9-9-25]	Pass
20	Apacer	Hynix	2GB	PC3-10600 (DDR3-1333)	H5TQ2G83BFR H9C	78.A1GDE.AF00C 1.5V [256Mx8b-x8/256Mx64b,CL=9]	Pass
21	DSL	Hynix	2GB	PC3-10600 (DDR3-1333)	H5TQ2G83BFR H9C	D3UH56081XH15AA 1.5V [256Mx8b-x8/256Mx64b,CL=9]	Pass
22	Transcend	ELPIDA	2GB	PC3-10600 (DDR3-1333)	J1108BDBG-DJ-F	TS256MLK64V3U 1.5V [128Mx8b-x16/256Mx64b,CL=9]	Pass
23	Crucial	Micron	2GB	PC3-10600 (DDR3-1333)	MT8JTF25664AZ-1G4D1	CT25664BA1339.8FD 1.5V [256Mx8b-x8/256Mx64b,CL=9]	Pass
24	Transcend	SEC	2GB	PC3-10600 (DDR3-1333)	K4B2G0846D	TS256MLK64V3N 1.5V [256Mx8b-x8/256Mx64b,CL=9]	Pass



<b>25</b>	Transcend	Hynix	2GB	PC3-10600 (DDR3-1333)	H5TQ2G83CFR PBC	TS256MLK64V3N 1.5V [256Mx8b-x8/256Mx64b,CL=9]	<b>Pass</b>
<b>26</b>	Apacer	ELPIDA	1GB	PC3-10600 (DDR3-1333)	J1108BABG-DJ-E	AP1024UT1K2N 1.5V	<b>Pass</b>
<b>27</b>	Transcend	ELPIDA	1GB	PC3-10600 (DDR3-1333)	J1108BASE-DJ-E	TS128MLK64V3U 1.5V [128Mx8b/128Mx64b,CL=9]	<b>Pass</b>
<b>28</b>	Kingston	ELPIDA	1GB	PC3-10600 (DDR3-1333)	J1108BABG-DJ-E	KVR1333D3N9/1G 1.5V	<b>Pass</b>
<b>29</b>	ADATA	ADATA	1GB	PC3-10600 (DDR3-1333)	AD30908C8D-151G	AD3133300210U(AD6311A08) 1.5V±0.75 [1GX8,CL=9]	<b>Pass</b>
<b>30</b>	Apacer	Hynix	1GB	PC3-10600 (DDR3-1333)	H5TQ1G83BFR H9C	78.01GC6.AF0 1.5V [128Mx8b-x8/128Mx64b,CL=9]	<b>Pass</b>
<b>31</b>	Transcend	SEC	1GB	PC3-10600 (DDR3-1333)	K4B1G0846G	TS128MLK64V3U 1.5V [128Mx8b-x8/128Mx64b,CL=9]	<b>Pass</b>
<b>32</b>	Kingston	Hynix	4GB	PC3-8500 (DDR3-1066)	H5TQ2G83AFR	KVR1066D3N7/4G 1.5V [512MX64,CL=7]	<b>Pass</b>
<b>33</b>	Transcend	SEC	2GB	PC3-8500 (DDR3-1066)	K4B1G0846D	TS256MLK64V1U 1.5V [128Mx8b/256Mx64b,CL=7-7-7]	<b>Pass</b>
<b>34</b>	INNODISK	Hynix	2GB	PC3-8500 (DDR3-1066)	H5TQ1G83BFR H9C	M3UN-2GHFACM7-B 1.5V [128Mx8b/256Mx64b]	<b>Pass</b>



No.	Brand	Chip	Size	Type	Chip Model No.	Vendor Part No.	Result
35	Hynix	Hynix	2GB	PC3-8500 (DDR3-1066)	H5TQ2G83BFR-G7C	HMT325U6BFR8C-G7 1.5V [256Mx8b-8/256Mx64b,CL=7]	Pass
36	Transcend	SEC	1GB	PC3-8500 (DDR3-1066)	K4B1G0846D	TS128MLK64V1U 1.5V [128Mx8b/128Mx64b,CL=7-7-7]	Pass
37	ADATA	ELPIDA	1GB	PC3-8500 (DDR3-1066)	J1108BABG-DJ-E	SU3U1066B1G7-B 1.5V [1Gx8,CL=7]	Pass

### 1.3 DDR3 Module 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 S3/S4/S5 - 3 times.

No.	DDR3 Module	Test Environment	3DMark Score	Result
1	Transcend (TS1GLK64V6H 1.5V) [512Mx8b-x16/1024Mx64b,CL=11] / Micron (1ZD27-D9PBC/2CD27-D9PBC) / PC3-12800 (DDR3-1600) / 8GB *1	M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400007) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i7-4770S (Haswell/H3-QE73) / 3.1GHz DIMM Slot: DIMM-1 (Single channel) SATA HDD: Maxtor / STM3320614AS SATA2 NCQ 320GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 7 Ultimate 64Bit (English) & SP1	P1019	Pass
2	Apacer (75.C93DK.G000C 1.35V/1.5V) [512Mx8b-x16/1024Mx64b,CL=11] / Micron (2ED27-D9PCP) / PC3-12800 (DDR3L-1600) / 8GB *2	M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400007) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i7-4770S (Haswell/H3-QE73) / 3.1GHz DIMM Slot: DIMM-1/3 (Dual channel) SATA HDD: Maxtor / STM3320614AS SATA2 NCQ 320GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 7 Ultimate 64Bit (English) & SP1	P1424	Pass

<p><b>3</b></p>	<p>Crucial (CT102464BD160B.16FED) (MT16KTF1G64AZ-1G6E1) 1.35V/1.5V) [512Mx8b-x16/1024Mx64b, CL=11-11-11-30] / Micron (2REI7D9QB3) / PC3-12800 (DDR3L-1600) / 8GB *2</p>	<p>M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400007) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i7-4770S (Haswell/H3-QE73) / 3.1GHz DIMM Slot: DIMM-1/3 (Dual channel) SATA HDD: Maxtor / STM3320614AS SATA2 NCQ 320GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 7 Ultimate 64Bit (English) &amp; SP1 Test Summary: Overnight looping under 11 hours</p>	<p><b>P1421</b></p>	<p><b>Pass</b></p>
<p><b>4</b></p>	<p>Apacer (78.B1GE3.AF10C 1.5V) [256Mx8b-x16/512Mx64b,CL=11] / Hynix (H5TQ2G83BFR PBC) / PC3-12800 (DDR3-1600) / 4GB *2</p>	<p>M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400013) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i7-4770S (Haswell/H3-QE73) / 3.1GHz DIMM Slot: DIMM-1/3 (Dual channel) SATA HDD: Seagate / ST500DM002 SATA3 NCQ 500GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 7 Ultimate 32Bit (English) &amp; SP1</p>	<p><b>P1131</b></p>	<p><b>Pass</b></p>



No.	DDR3 Module	Test Environment	3DMark Score	Result
5	Hynix (HMT351U6BFR8C-PBNO 1.5V) [256Mx8b-x16/512Mx64b,CL=11] / Hynix (H5TQ2G83BFR PBC) / PC3-12800 (DDR3-1600) / 4GB *2	M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400007) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i7-4770S (Haswell/H3-QE73) / 3.1GHz DIMM Slot: DIMM-1/3 (Dual channel) SATA HDD: Maxtor / STM3320614AS SATA2 NCQ 320GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 7 Ultimate 64Bit (English) & SP1	P1427	Pass
6	Apacer (75.B83DE.G030C 1.5V) [256Mx8b-x16/512Mx64b,CL=11] / Hynix (H5TC2G83EFR PBA) / PC3-12800 (DDR3-1600) / 4GB *2	M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400007) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i7-4770S (Haswell/H3-QE73) / 3.1GHz DIMM Slot: DIMM-1/3 (Dual channel) SATA HDD: Maxtor / STM3320614AS SATA2 NCQ 320GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 7 Ultimate 64Bit (English) & SP1	P1430	Pass
7	INNODISK (M3UP-4GMJAL0C-M 1.35V/1.5V) [256Mx8b-x16/512Mx64b,CL=9] / Micron (1WM77-D9PFJ) / PC3-12800 (DDR3L-1600) / 4GB *2	M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400007) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i7-4770S (Haswell/H3-QE73) / 3.1GHz DIMM Slot: DIMM-1/3 (Dual channel) SATA HDD: Maxtor / STM3320614AS SATA2 NCQ 320GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 7 Ultimate 64Bit (English) & SP1	P1427	Pass

<p><b>8</b></p>	<p>Apacer (75.B83DK.G000C 1.35V/1.5V) [256Mx8b-x16/512Mx64b,CL=11] / Micron (2DM77-D9PFJ) / PC3-12800 (DDR3L-1600) / 4GB *2</p>	<p>M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400013) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i7-4770S (Haswell/H3-QE73) / 3.1GHz DIMM Slot: DIMM-1/3 (Dual channel) SATA HDD: Seagate / ST500DM002 SATA3 NCQ 500GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 8 Enterprise 64Bit (English)</p>	<p><b>P1320</b></p>	<p><b>Pass</b></p>
<p><b>9</b></p>	<p>Hynix (HMT325U6BFR8C-PBNO 1.5V) [256Mx8b-x8/256Mx64b,CL=11] / Hynix (H5TQ2G83BFR PBC) / PC3-12800 (DDR3-1600) / 2GB *2</p>	<p>M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400013) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i5-4570S (Haswell/H3-QE74) / 2.9GHz DIMM Slot: DIMM-1/3 (Dual channel) SATA HDD: Seagate / ST500DM002 SATA3 NCQ 500GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 8 Enterprise 32Bit (English)</p>	<p><b>P1262</b></p>	<p><b>Pass</b></p>
<p><b>10</b></p>	<p>Apacer (75.A83DE.G020C 1.5V) [256Mx8b-x8/256Mx64b,CL=11] / Hynix (H5TC2G83EFR PBA) / PC3-12800 (DDR3-1600) / 2GB *2</p>	<p>M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400007) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i5-4570TE (Haswell/C0-SR17Z) / 2.7GHz DIMM Slot: DIMM-1/3 (Dual channel) SATA HDD: Maxtor / STM3320614AS SATA2 NCQ 320GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 7 Ultimate 32Bit (English) &amp; SP1</p>	<p><b>P822</b></p>	<p><b>Pass</b></p>





No.	DDR3 Module	Test Environment	3DMark Score	Result
11	INNODISK (M3UP-2GMJBL0C-M 1.35V/1.5V) [256Mx8b-x8/256Mx64b,CL=9] / Micron (1WM77-D9PFJ) / PC3-12800 (DDR3L-1600) / 2GB *2	M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400013) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i5-4570S (Haswell/H3-QE74) / 2.9GHz DIMM Slot: DIMM-1/3 (Dual channel) SATA HDD: Seagate / ST500DM002 SATA3 NCQ 500GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 8 Enterprise 32Bit (English)	P1266	Pass
12	Transcend (TS1GLK64V3H 1.5V) [512Mx8b-x16/1Gx64b,CL=9] / Micron (1ZD27-D9PBC/2CD27-DP9BC) / PC3-10600 (DDR3-1333) / 8GB *2	M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400013) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i5-4670S (Haswell/H3-QE75) / 3.1GHz DIMM Slot: DIMM-1/3 (Dual channel) SATA HDD: Seagate / ST500DM002 SATA3 NCQ 500GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 8 Enterprise 64Bit (English) Test Summary: Overnight looping under 11 hours	P1308	Pass
13	Transcend (TS512MLK64V3N 1.5V) [256Mx8b-x16/512Mx64b,CL=9] / SEC (K4B2G0846D) / PC3-10600 (DDR3-1333) / 4GB *1	M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400007) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i7-4770S (Haswell/H3-QE73) / 3.1GHz DIMM Slot: DIMM-1 (Single channel) SATA HDD: Maxtor / STM3320614AS SATA2 NCQ 320GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 8 Enterprise 64Bit (English) Test Summary: Overnight looping under 11 hours	P1231	Pass

<p><b>14</b></p>	<p>Transcend (TS512MLK64V3N 1.5V) [256Mx8b-x16/512Mx64b,CL=9] / Hynix (H5TQ2G83CFR PBC) / PC3-10600 (DDR3-1333) / 4GB *2</p>	<p>M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400013) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i7-4770S (Haswell/H3-QE73) / 3.1GHz DIMM Slot: DIMM-1/3 (Dual channel) SATA HDD: Seagate / ST500DM002 SATA3 NCQ 500GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 7 Ultimate 64Bit (English) &amp; SP1 Test Summary: Overnight looping under 11 hours</p>	<p><b>P1458</b></p>	<p><b>Pass</b></p>
<p><b>15</b></p>	<p>Apacer (78.B1GEG.4210C 1.35V) [256Mx8b-x16/512Mx64b,CL=9] / ELPIDA (J2108ECSE-DJ-F) / PC3-10600 (DDR3L-1333) / 4GB *2</p>	<p>M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400013) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i7-4770S (Haswell/H3-QE73) / 3.1GHz DIMM Slot: DIMM-1/3 (Dual channel) SATA HDD: Seagate / ST500DM002 SATA3 NCQ 500GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 8 Enterprise 64Bit (English) Test Summary: Overnight looping under 10 hours</p>	<p><b>P1421</b></p>	<p><b>Pass</b></p>



No.	DDR3 Module	Test Environment	3DMark Score	Result
16	Transcend (TS256MLK64V3U 1.5V) [128Mx8b/256Mx64b,CL=7] / SEC (K4B1G0846D) / PC3-10600 (DDR3-1333) / 2GB *1	M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400007) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i7-4770S (Haswell/H3-QE73) / 3.1GHz DIMM Slot: DIMM-1 (Single channel) SATA HDD: Maxtor / STM3320614AS SATA2 NCQ 320GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 7 Ultimate 32Bit (English) & SP1	P1218	Pass
17	ADATA (AD31333002GOU(AD63I1B16) 1.5V±0.75) [2GX16,CL=9] / ADATA (AD30908C8D-151G) / PC3-10600 (DDR3-1333) / 2GB *2	M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400007) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i7-4770S (Haswell/H3-QE73) / 3.1GHz DIMM Slot: DIMM-1/3 (Dual channel) SATA HDD: Maxtor / STM3320614AS SATA2 NCQ 320GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 8 Enterprise 64Bit (English)	P1403	Pass
18	Transcend (JM1333KLU-2G 1.5V) [128Mx8b/256Mx64b,CL=9-9-9] / Transcend (TK243WAF3) / PC3-10600 (DDR3-1333) / 2GB *2	M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400013) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i7-4770TE (Haswell/C0-SR183) / 2.3GHz DIMM Slot: DIMM-1/3 (Dual channel) SATA HDD: Seagate / ST500DM002 SATA3 NCQ 500GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 8 Enterprise 64Bit (English)	P1140	Pass

<p><b>19</b></p>	<p>Elixir (M2Y2G64CB8HA9N-CG 1.5V) [256Mx64b,CL=9-9-9-25] / Elixir (M2Y2G64CB8HA9N-CG 1.5V) / PC3-10600 (DDR3-1333) / 2GB *2</p>	<p>M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400013) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i7-4770S (Haswell/H3-QE73) / 3.1GHz DIMM Slot: DIMM-1/3 (Dual channel) SATA HDD: Seagate / ST500DM002 SATA3 NCQ 500GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 7 Ultimate 32Bit (English) &amp; SP1</p>	<p><b>P1297</b></p>	<p><b>Pass</b></p>
<p><b>20</b></p>	<p>Apacer (78.A1GDE.AF00C 1.5V) [256Mx8b-x8/256Mx64b,CL=9] / Hynix (H5TQ2G83BFR H9C) / PC3-10600 (DDR3-1333) / 2GB *1</p>	<p>M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400013) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i5-4570S (Haswell/H3-QE74) / 2.9GHz DIMM Slot: DIMM-1 (Single channel) SATA HDD: Seagate / ST500DM002 SATA3 NCQ 500GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 7 Ultimate 32Bit (English) &amp; SP1</p>	<p><b>P999</b></p>	<p><b>Pass</b></p>
<p><b>21</b></p>	<p>DSL (D3UH56081XH15AA 1.5V) [256Mx8b-x8/256Mx64b,CL=9] / Hynix (H5TQ2G83BFR H9C) / PC3-10600 (DDR3-1333) / 2GB *2</p>	<p>M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400007) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i7-4770S (Haswell/H3-QE73) / 3.1GHz DIMM Slot: DIMM-1/3 (Dual channel) SATA HDD: Maxtor / STM3320614AS SATA2 NCQ 320GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 7 Ultimate 64Bit (English) &amp; SP1</p>	<p><b>P1379</b></p>	<p><b>Pass</b></p>



No.	DDR3 Module	Test Environment	3DMark Score	Result
22	Transcend (TS256MLK64V3U 1.5V) [128Mx8b-x16/256Mx64b,CL=9] / ELPIDA (J1108BDBG-DJ-F) / PC3-10600 (DDR3-1333) / 2GB *2	M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400007) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i7-4770S (Haswell/H3-QE73) / 3.1GHz DIMM Slot: DIMM-1/3 (Dual channel) SATA HDD: Maxtor / STM3320614AS SATA2 NCQ 320GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 8 Enterprise 32Bit (English)	P1398	Pass
23	Crucial (CT25664BA1339.8FD 1.5V) [256Mx8b-x8/256Mx64b,CL=9] / Micron (MT8JTF25664AZ-1G4D1) / PC3-10600 (DDR3-1333) / 2GB *2	M/B: HD630-H81D Rev.2 (021) (PCH Rev.C2/BSD240400014) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i7-4770S (Haswell/H3-QE73) / 3.1GHz DIMM Slot: DIMM-1/3 (Dual channel) SSD: Intel / SSDSC2CW120A3K5 SATA3 120GB/2.5" Display: On Board DVD-ROM: Pioneer / DVD-231DW 18X SATA Power: Delta / GPS-500BB 500W O.S.: Windows 7 Ultimate 32Bit (English) & SP1	P1370	Pass
24	Transcend (TS256MLK64V3N 1.5V) [256Mx8b-x8/256Mx64b,CL=9] / SEC (K4B2G0846D) / PC3-10600 (DDR3-1333) / 2GB *2	M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400007) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i7-4770S (Haswell/H3-QE73) / 3.1GHz DIMM Slot: DIMM-1/3 (Dual channel) SATA HDD: Maxtor / STM3320614AS SATA2 NCQ 320GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 7 Ultimate 32Bit (English) & SP1	P1035	Pass



<p><b>25</b></p>	<p>Transcend (TS256MLK64V3N 1.5V) [256Mx8b-x8/256Mx64b,CL=9] / Hynix (H5TQ2G83CFR PBC) / PC3-10600 (DDR3-1333) / 2GB *1</p>	<p>M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400013) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i7-4770S (Haswell/H3-QE73) / 3.1GHz DIMM Slot: DIMM-3 (Single channel) SATA HDD: Seagate / ST500DM002 SATA3 NCQ 500GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 8 Enterprise 32Bit (English) Test Summary: Overnight looping under 11 hours</p>	<p><b>P1004</b></p>	<p><b>Pass</b></p>
<p><b>26</b></p>	<p>Apacer (AP1024UT1K2N 1.5V) / ELPIDA (J1108BAGB-DJ-E) / PC3-10600 (DDR3-1333) / 1GB *2</p>	<p>M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400007) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i7-4770S (Haswell/H3-QE73) / 3.1GHz DIMM Slot: DIMM-1/3 (Dual channel) SATA HDD: Maxtor / STM3320614AS SATA2 NCQ 320GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 8 Enterprise 32Bit (English)</p>	<p><b>P1378</b></p>	<p><b>Pass</b></p>
<p><b>27</b></p>	<p>Transcend (TS128MLK64V3U 1.5V) [128Mx8b/128Mx64b,CL=9] / ELPIDA (J1108BASE-DJ-E) / PC3-10600 (DDR3-1333) / 1GB *2</p>	<p>M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400007) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i7-4770S (Haswell/H3-QE73) / 3.1GHz DIMM Slot: DIMM-1/3 (Dual channel) SATA HDD: Maxtor / STM3320614AS SATA2 NCQ 320GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 7 Ultimate 32Bit (English) &amp; SP1</p>	<p><b>P1374</b></p>	<p><b>Pass</b></p>

No.	DDR3 Module	Test Environment	3DMark Score	Result
28	Kingston (KVR1333D3N9/1G 1.5V) / ELPIDA (J1108BABG-DJ-E) / PC3-10600 (DDR3-1333) / 1GB *2	M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400013) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i7-4770S (Haswell/H3-QE73) / 3.1GHz DIMM Slot: DIMM-1/3 (Dual channel) SATA HDD: Seagate / ST500DM002 SATA3 NCQ 500GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 7 Ultimate 32Bit (English) & SP1	P1380	Pass
29	ADATA (AD3133300210U(AD63I1A08) 1.5V±0.75) [1GX8,CL=9] / ADATA (AD30908C8D-151G) / PC3-10600 (DDR3-1333) / 1GB *2	M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400013) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i5-4570S (Haswell/H3-QE74) / 2.9GHz DIMM Slot: DIMM-1/3 (Dual channel) SATA HDD: Seagate / ST500DM002 SATA3 NCQ 500GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 7 Ultimate 32Bit (English) & SP1	P1249	Pass
30	Apacer (78.01GC6.AF0 1.5V) [128Mx8b-x8/128Mx64b,CL=9] / Hynix (H5TQ1G83BFR H9C) / PC3-10600 (DDR3-1333) / 1GB *2	M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400013) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i5-4570S (Haswell/H3-QE74) / 2.9GHz DIMM Slot: DIMM-1/3 (Dual channel) SATA HDD: Seagate / ST500DM002 SATA3 NCQ 500GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 8 Enterprise 32Bit (English)	P1254	Pass

<p><b>31</b></p>	<p>Transcend (TS128MLK64V3U 1.5V) [128Mx8b-x8/128Mx64b,CL=9] / SEC (K4B1G0846G) / PC3-10600 (DDR3-1333) / 1GB *2</p>	<p>M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400013) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i5-4570S (Haswell/H3-QE74) / 2.9GHz DIMM Slot: DIMM-1/3 (Dual channel) SATA HDD: Seagate / ST500DM002 SATA3 NCQ 500GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 7 Ultimate 32Bit (English) &amp; SP1</p>	<p><b>P1247</b></p>	<p><b>Pass</b></p>
<p><b>32</b></p>	<p>KingSton (KVR1066D3N7/4G 1.5V) [512MX64,CL=7] / Hynix (H5TQ2G83AFR) / PC3-8500 (DDR3-1066) / 4GB *2</p>	<p>M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400013) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i7-4770S (Haswell/H3-QE73) / 3.1GHz DIMM Slot: DIMM-1/3 (Dual channel) SATA HDD: Seagate / ST500DM002 SATA3 NCQ 500GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 8 Enterprise 64Bit (English)</p>	<p><b>P1233</b></p>	<p><b>Pass</b></p>
<p><b>33</b></p>	<p>Transcend (TS256MLK64V1U 1.5V) [128Mx8b/256Mx64b,CL=7-7-7] / SEC (K4B1G0846D) / PC3-8500 (DDR3-1066) / 2GB *2</p>	<p>M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400007) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i7-4770S (Haswell/H3-QE73) / 3.1GHz DIMM Slot: DIMM-1/3 (Dual channel) SATA HDD: Maxtor / STM3320614AS SATA2 NCQ 320GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 8 Enterprise 32Bit (English)</p>	<p><b>P1369</b></p>	<p><b>Pass</b></p>





No.	DDR3 Module	Test Environment	3DMark Score	Result
34	INNODISK (M3UN-2GHFACM7-B 1.5V) [128Mx8b/256Mx64b] / Hynix (H5TQ1G83BFR H9C) / PC3-8500 (DDR3-1066) / 2GB *2	M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400007) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i7-4770S (Haswell/H3-QE73) / 3.1GHz DIMM Slot: DIMM-1/3 (Dual channel) SATA HDD: Maxtor / STM3320614AS SATA2 NCQ 320GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 8 Enterprise 64Bit (English)	P1373	Pass
35	Hynix (HMT325U6BFR8C-G7 1.5V) [256Mx8b-8/256Mx64b,CL=7] / Hynix (H5TQ2G83BFR-G7C) / PC3-8500 (DDR3-1066) / 2GB *2	M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400007) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i7-4770S (Haswell/H3-QE73) / 3.1GHz DIMM Slot: DIMM-1/3 (Dual channel) SATA HDD: Maxtor / STM3320614AS SATA2 NCQ 320GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 7 Ultimate 64Bit (English) & SP1	P1335	Pass
36	Transcend TS128MLK64V1U 1.5V) [128Mx8b/128Mx64b,CL=7-7-7] / SEC (K4B1G0846D) / PC3-8500 (DDR3-1066) / 1GB *2	M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400013) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i7-4770S (Haswell/H3-QE73) / 3.1GHz DIMM Slot: DIMM-1/3 (Dual channel) SATA HDD: Seagate / ST500DM002 SATA3 NCQ 500GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 7 Ultimate 32Bit (English) & SP1	P1189	Pass

<p><b>37</b></p>	<p>ADATA (SU3U1066B1G7-B 1.5V) [1Gx8,CL=7] / ELPIDA (J1108BABG-DJ-E) / PC3-8500 (DDR3-1066) / 1GB *2</p>	<p>M/B: HD630-H81D Rev.2 (021) (PCH Rev.C1/BSD240400013) M/B BIOS: AMI-Aptio 07/29/2013 M/B Driver: Demo Jul/05/2013 CPU: Intel / Core i7-4770S (Haswell/H3-QE73) / 3.1GHz DIMM Slot: DIMM-1/3 (Dual channel) SATA HDD: Seagate / ST500DM002 SATA3 NCQ 500GB/7200RPM Display: On Board DVD-RW: Lite-On / iHAS324-U32D SATA Power: Delta / GPS-500BB 500W O.S.: Windows 7 Ultimate 32Bit (English) &amp; SP1</p>	<p><b>P1204</b></p>	<p><b>Pass</b></p>
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