

1. Stability Test:

1.1 CPU Function Test:

Test Purpose	Test CPU functions work normally under Windows operating system
Test Procedure	<ol style="list-style-type: none"> 1. Install Windows operating system 2. Install M/B device drivers 3. Check CPU temperature in BIOS setup menu 4. Run 3DMark for Windows Ver.2.5.5029 BenchMark 3 times and check CPU Temp. 5. Using CPU-Z check CPU info
Test Criteria	It should be correct for each test step

No.	CPU	Type	Idle CPU Temp.	Full Loading CPU Temp.	Result
1	Intel / 1.6GHz	Atom E3950 (ApolloLake / SR33P) / 12W / BGA1296	27 °C	33 °C	Pass
2	Intel / 1.6GHz	Atom E3940 (ApolloLake / SR33M) / 9.5W / BGA1296	28 °C	34 °C	Pass
3	Intel / 1.3GHz	Atom E3930 (ApolloLake /SR33Q) / 6.5W / BGA1296	28 °C	35 °C	Pass
4	Intel / 1.1GHz	Pentium N4200 (Apollolake / SR2Z5) / 6W / BGA1296	26 °C	32 °C	Pass
5	Intel / 1.1GHz	Celeron N3350 (Apollolake / SR2Z7) / 6W / BGA1296	32 °C	38 °C	Pass

1.2 Memory Function Test:

Test Purpose	Test Memory functions work normally under Windows operating system
Test Procedure	<ol style="list-style-type: none"> 1. Install Windows operating system 2. Install M/B device drivers 3. Run AIDA64 Cache and Memory Benchmark Ver.5.97.4600 - 1 time 4. Run PassMark Performance Test 9.0 Build1023 - 1 time 5. Run 3DMark for Windows Ver.2.5.5029 BenchMark - 3 times 6. S3(Sleep)/S4(Hibernate)/S5(Shutdown) test - 3 times
Test Criteria	It should be correct for each test step

1.2.1 DDRIII:

No.	Function	Result
1	Dual Channel mode	Pass
2	Single Channel mode	Pass

1.2.2 Application Test:

No.	Software	Test Keypoint	Result
1	PassMark Memtest86 V7.5 Free	1. Burn-In test 12 hours.	Pass

1.2.3 DDR3 SO-DIMM Approved List:

No.	Brand	Chip	Size	Type	Chip Model No.	Vendor Part No.	Result
1	Crucial	Micron	8GB	PC3L-12800 (DDR3L-1600)	2RD27D9PCP	CT102464BF160B.16FDD (MT16KTF1G64HZ-1G6D1) 1.35/1.5V[512Mx8b-x16/ 1024Mx64b,CL=11-11-11-30]	Pass
2	ADATA	Micron	8GB	PC3L-12800 (DDR3L-1600)	3DE77D9Q8J	ADDS1600W8G11-BMIE (10281788) 1.35V/1.5V[512Mx8b-x16/ 1GBx64b,CL=11-11-11]	Pass
3	TLA	SEC	8GB	PC3-12800 (DDR3-1600)	K4B4G0846E-BYMA	AD3SST8GSAWB-DKGCEL	Pass
4	TLA	SEC	4GB	PC3-12800 (DDR3-1600)	K4B4G1646E-BYMA	AD3SSW4GB1WB-DKGCEL	Pass
5	Crucial	Micron	4GB	PC3L-12800 (DDR3L-1600)	2RM77D9PFJ	CT51264BF160B.16FMR(MT16KTF51 264HZ-1G6M1)1.35V/1.35V [256Mx8b-x16/512Mx64b, CL=11-11-11-30]	Pass
6	Transcend	SEC	4GB	PC3L-12800 (DDR3L-1600)	K4B4G0846D	TS512MSK64W6H 1.35V/1.5V [512Mx8b-x8/512Mx64b, CL=11-11-11]	Pass
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	Apacer	ELPIDA	4GB	PC3-10600 (DDR3L-1333)	J2108ECSE-DJ-F	78.B2GCL4210C 1.35V [256Mx8b-x16/512Mx64b,CL=9]	Pass
9	Crucial	Micron	2GB	PC3L-10600 (DDR3L-1333)	2EM77D9PFJ	CT25664BF1339.8FMR(MT8KTF2566 4HZ-1G4M1)1.35V/1.5V [56Mx8b-x8/256Mx64b,CL=9]	Pass
10	Transcend	Hynix	2GB	PC3-10600 (DDR3L-1333)	H5TQ2G83BFR-H9C	TS256MSK64W3N 1.35V/1.5V [256Mx8b-x8/256Mx64b,CL=9]	Pass



1.2.4 DDR3 SO-DIMM Test Procedures:

No.	DDR3 Module	Test Procedures	Result
1	Crucial (CT102464BF160B.16FDD (MT16KTF1G64HZ-1G6D1) 1.35V/1.5V) [512Mx8b-x16/1024Mx64b,CL=11-11-11-30] /Micron (2RD27D9PCP)/PC3L-12800 (DDR3L-1600) /8GB *2	M/B: AL170-BC-E3950 Rev.2 (012) (BSI223310001) CPU: Intel Atom x7-E3950 1.60GHz DIMM Slot: DIMM-1/2 Dual Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1/2) READ:14852 MB/s WRITE:17049 MB/s COPY:15769 MB/s Passmark PerformanceTest 9.0 Build 1023 CPU Mark:2079.3 Memory Mark:1054.7 3DMark for Windows(V 2.5.5029)3times Cloud Gate:2172 Ice Storm:17300 Sky diver:1850 Fire Strike:517	Pass
2	ADATA (ADD51600W8G11-BMIE (10281788) 1.35V/1.5V) [512Mx8b-x16/1GBx64b,CL=11-11-11] / Micron (3DE77D9Q8J) / PC3L-12800 (DDR3L-1600) / 8GB *	M/B: AL170-BC-E3940 Rev.2 (021) (BSI223210003) CPU: Intel Atom x5-E3940 1.60GHz DIMM Slot: DIMM-1 Single Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) SINGLE CHANNEL(DIMM-1) READ:10387 MB/s WRITE:10776 MB/s COPY:10198 MB/s Passmark PerformanceTest 9.0 Build 1023 CPU Mark:893.3 Memory Mark:520.9 3DMark for Windows(V 2.5.5029)3times Cloud Gate:1567 Ice Storm:11585 Sky diver:1091 Fire Strike:321	Pass
3	PC3-12800(DDR3-1600)/TLA-AD3SST8GSAWB-DKGCEL/SEC-K4B4G0846E-BYMA/8GB*	M/B: AL170-BC-E3940 Rev.2 (021) (BSI223210003) CPU: Intel Atom x5-E3940 1.60GHz DIMM Slot: DIMM-2 Single Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) SINGLE CHANNEL(DIMM-2) READ:10371 MB/s WRITE:10786 MB/s COPY:10261 MB/s Passmark PerformanceTest 9.0 Build 1023 CPU Mark:894.5 Memory Mark:521.5 3DMark for Windows(V 2.5.5029)3times Cloud Gate:1767 Ice Storm:13267 Sky diver:1099 Fire Strike:318	Pass
4	PC3-12800(DDR3-1600)/TLA-AD3SSW4GB1WB-DKGCEL/SEC-K4B4G1646E-BYMA/4GB*2	M/B: AL170-TC-E3930 Rev.2 (021) (BSI222910001) CPU: Intel Atom x5-E3930 1.30GHz DIMM Slot: DIMM-1/2 Dual Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1/2) READ:12443 MB/s WRITE:10092 MB/s COPY:15064 MB/s Passmark PerformanceTest 9.0 Build 1023 CPU Mark:448.4 Memory Mark:482.2 3DMark for Windows(V 2.5.5029)3times Cloud Gate:1271 Ice Storm:10428 Sky diver:1010 Fire Strike:334	Pass

5	Crucial (CT51264BF160B.16FMR (MT16KTF51264HZ-1G6M1) 1.35V/1.5V) [256Mx8b-x16/512Mx64b,CL=11-11-11-30] /Micron (2RM77D9PFJ) /PC3L-12800(DDR3L-1600)/4GB *2	M/B: AL170-BC-E3940 Rev.2 (012) (BSI223210003) CPU: Intel Atom x5-E3940 1.60GHz DIMM Slot: DIMM-1/2 Dual Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1/2) READ:14739 MB/s WRITE:17033 MB/s COPY:15631 MB/s Passmark PerformanceTest 9.0 Build 1023 CPU Mark:900.7 Memory Mark:520.8 3DMark for Windows(V 2.5.5029)3times Cloud Gate:1913 Ice Storm:13756 Sky diver:1143 Fire Strike:364	Pass
6	Transcend (TS512MSK64W6H 1.35V/1.5V) [512Mx8b-x8/512Mx64b,CL=11-11-11] / SEC (K4B4G0846D) / PC3L-12800(DDR3L-1600) / 4GB *	M/B: AL170-BC-E3950 Rev.2 (012) (BSI223310001) CPU: Intel Atom x7-E3950 1.60GHz DIMM Slot: DIMM-1 Single Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.95.4500) SINGLE CHANNEL(DIMM-1) READ:11281 MB/s WRITE:10918 MB/s COPY:9736 MB/s Passmark PerformanceTest 9.0 Build 1023 CPU Mark:1984 Memory Mark:891.9 3DMark for Windows(V 2.5.5029)3times Cloud Gate:2723 Ice Storm:21538 Sky diver:1681 Fire Strike:378	Pass
7	ADATA (ADDS1600W4G11-BMIE (10281820) 1.35V/1.5V) [512Mx8b-x8/512Mx64b,CL=11-11-11] / Micron (3DE77D9Q8J) / PC3L-12800 (DDR3L-1600) / 4GB *	M/B: AL170-BC-E3950 Rev.2 (012) (BSI223310001) CPU: Intel Atom x7-E3950 1.60GHz DIMM Slot: DIMM-2 Single Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.95.4500) SINGLE CHANNEL(DIMM-2) READ:11299 MB/s WRITE:10893 MB/s COPY:9783 MB/s Passmark PerformanceTest 9.0 Build 1023 CPU Mark:1985.8 Memory Mark:893.2 3DMark for Windows(V 2.5.5029)3times Cloud Gate:2788 Ice Storm:21466 Sky diver:1674 Fire Strike:381	Pass
8	Apacer (78.B2GCL4210C 1.35V) [256Mx8b-x16/512Mx64b,CL=9] / ELPIDA (J2108ECSE-DJ-F) / PC3-10600 (DDR3L-1333) / 4GB *	M/B: AL170-BC-E3940 Rev.2 (012) (BSI223210003) CPU: Intel Atom x5-E3940 1.60GHz DIMM Slot: DIMM-1 Single Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) SINGLE CHANNEL(DIMM-1) READ:9162 MB/s WRITE:9377 MB/s COPY:8870 MB/s Passmark PerformanceTest 9.0 Build 1023 CPU Mark:888.3 Memory Mark:493.8 3DMark for Windows(V 2.5.5029)3times Cloud Gate:1697 Ice Storm:12540 Sky diver:1037 Fire Strike:297	Pass



<p>9</p>	<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: AL170-BC-N3350 Rev.2 (021) (BSI223110003) CPU: Intel Celeron N3350 1.10GHz DIMM Slot: DIMM-1/2 Dual Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1/2) READ:11370 MB/s WRITE:10670 MB/s COPY:13130 MB/s Passmark PerformanceTest 9.0 Build 1023 CPU Mark:1238.9 Memory Mark:917 3DMark for Windows(V 2.5.5029)3times Cloud Gate:2174 Ice Storm:12639 Sky diver:1159 Fire Strike:364</p>	<p>Pass</p>
<p>10</p>	<p>Transcend (TS256MSK64W3N 1.35V/1.5V) [256Mx8b-x8/256Mx64b,CL=9] / Hynix (H5TQ2G83BFR-H9C) / PC3-10600 (DDR3L-1333) / 2GB *2</p>	<p>M/B: AL170-BC-N4200 Rev.2 (021) (BSI223010003) CPU: Intel Pentium N4200 1.10GHz DIMM Slot: DIMM-1/2 Dual Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1/2) READ:13467 MB/s WRITE:16474 MB/s COPY:14251 MB/s Passmark PerformanceTest 9.0 Build 1023 CPU Mark:2380.9 Memory Mark:975.4 3DMark for Windows(V 2.5.5029)3times Cloud Gate:2160 Ice Storm:16797 Sky diver:1941 Fire Strike:520</p>	<p>Pass</p>

