

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	29°C	41°C	Pass
2	Intel / 1.6GHz	Atom-E3940 (ApolloLake /SR33M) / 9.5W / BGA1296	28°C	38°C	Pass
3	Intel / 1.1GHz	Celeron N3350 (Apo loLake/SE2Z7) / 6W / BGA1296	26°C	36°C	Pass

1.1.1 Application Test:

No.	Software	Test Keypoint	Result
1	CPU-Z Ver.1.85.0	1. Check all information.	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 Driver 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 no problem for the test

1.2.1 DDRIII:

No.	Function	Result
1	Single Channel mode	Pass

1.2.2 Application Test:

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

1.2.3 DDR4 Approved List:

No.	Brand	Chip	Size	Type	Chip Model No.	Vendor Part No.	Result
1	TLA	SEC	8GB	DDR3-1600	K4B4G0846E-BYMA	AD3SST8GSAWB-DKGCEL	Pass
2	Crucial	Micron	8GB	PC3L-12800 (DDR3L-1600)	2RD27D9PCP	CT102464BF160B.16FDD (MT16KTF1G64HZ-1G6D1) 1.35V/1.5V[512Mx8 b-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	Crucial	Micron	4GB	PC3L-12800 (DDR3L-1600)	2RM77D9PFJ	CT51264BF160B.16FMR (MT16KTF51264HZ-1G6M1) 1.35V/1.35V[256M x8b-x16/ 512Mx64b,CL=11- 11-11-30]	Pass
5	Apacer	ELPIDA	4GB	PC3-10600 (DDR3L-1333)	J2108ECSE-DJ-F	78.B2GCL4210C 1.35V [256Mx8b-x16/512Mx64b,CL=9]	Pass
6	Transcend	SEC	4GB	PC3L-12800 (DDR3L-1600)	K4B4G0846D	TS512MSK64W6H 1.35V/1.5V [512Mx8b-x8/512Mx64b, CL=11-11-11]	Pass
7	Apacer	Micron	4GB	PC3L-12800 (DDR3L-1600)	2DM77-D9PFJ	75.B83DL.G000C 1.35V/1.5V [256Mx8b-x16/512 Mx64b,CL=11]	Pass
8	ADATA	Micron	4GB	PC3L-12800 (DDR3L-1600)	3DE77D9Q8J	A DS1600W4G11- BMIE (10281820) 1.35V/1.5V[512Mx8b-x8/512Mx64b, CL=11-11-11]	Pass
9	TLA	SEC	4GB	PC3L-12800 (DDR3L-1600)	K4B4G1646E-BYMA	AD3SSW4GB1WB-CKLGCEL	Pass
10	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
11	Transcend	Hynix	2GB	PC3-10600 (DDR3L-1333)	H5TQ2G83BFR-H9C	TS256MSK64W3N 1.35V/1.5V [256Mx8b-x8/256Mx64b,CL=9]	Pass
12	Crucial	Micron	2GB	PC3L-10600 (DDR3L-1333)	2EM77D9PFJ	CT25664BF1339.8FMR (MT8KTF25664HZ- 1G4M1)1.35V/ 1.5V[56Mx8b-x8/256Mx64b, CL=9]	Pass
13	INNODISK	Micron	2GB	PC3L-12800 (DDR3L-1600)	1WM77-D9PFJ	M3SP-2GMJCL0C- M 1.35V/1.5V [256Mx8b-x8/256 Mx64b,CL=9]	Pass

1.2.4 DDR3 SO-DIMM Test Procedures:

No.	DDR4 Module	Test Procedures	Result
1	DDR3-1600/ TLA-AD3SST8GSAWB-DKGCEL/ SEC-K4B4G0846E-BYMA/ 8GB*	M/B: AL553-TN-E3950 Rev.2 (021) CPU: [774-AL5531-600G/BSI291910001] DIMM Slot: Intel Atom x7-E3950 1.60GHz (SR33P) Test Summary: DIMM-1 Single Channel AIDA64 Cache and Memory Benchmark (V5. 97.4600) SINGLE CHANNEL (DIMM-1) READ:11468 MB/s WRITE:11409 MB/s COPY:10762 MB/s Passmark PerformanceTest 9.0 Build 1023 CPU Mark:1983 Memory Mark:976.3 3DMark for Windows (V 2.5.5029) 3 times Cloud Gate:1915 Ice Storm:13772 Sky diver:1611 Fire Strike:399	Pass

2	Crucial (CT102464BF160B.16FDD (MT16KTF1G64HZ-1G6D1) 1.35V/1.5V) [512Mx8b-x16/1024Mx64b,CL=11-11-11-30] / Micron (2RD27D9PCP) / PC3L-12800 (DDR3L-1600) / 8GB*	M/B: AL553-BN-E3940 Rev.2 (021) CPU: [774-AL5531-100G/BSI291410004] DIMM Slot: Intel Atom x5-E3940 1.60GHz (SR33M) Test Summary: DIMM-1 Single Channel AIDA64 Cache and Memory Benchmark (V5.97.4600) SINGLE CHANNEL (DIMM-1) READ:11469 MB/s WRITE:11405 MB/s COPY:11746 MB/s Passmark PerformanceTest 9.0 Build 1023 CPU Mark:1834.8 Memory Mark:915.4 3DMark for Windows (V 2.5.5029) 3 times Cloud Gate:1766 Ice Storm:13054 Sky diver:1084 Fire Strike:318	Pass
3	ADATA (ADDS1600W8G11-BMIE (10281788) 1.35V/1.5V) [512Mx8b-x16/1GBx64b,CL=11-11-11] / Micron (3DE77D9Q8J) / PC3L-12800 (DDR3L-1600) / 8GB*	M/B: AL553-TN-E3950 Rev.2 (021) CPU: [774-AL5531-600G/BSI291910001] DIMM Slot: Intel Atom x7-E3950 1.60GHz (SR33P) Test Summary: DIMM-1 Single Channel AIDA64 Cache and Memory Benchmark (V5. 7.4600) SINGLE CHANNEL (DIMM-1) READ:11404 MB/s WRITE:11370 MB/s COPY:10748 MB/s Passmark PerformanceTest 9.0 Build 1023 CPU Mark:2003 Memory Mark:981.1 3DMark for Windows (V 2.5.5029) 3 times Cloud Gate:2938 Ice Storm:19069 Sky diver:1747 Fire Strike:418	Pass
4	Crucial (CT51264BF160B.16FMR (MT16KTF51264HZ-1G6M1) 1.35V/1.5V) [256Mx8b-x16/512Mx64b,CL=11-11-11-30] / Micron (2RM77D9PFJ) / PC3L-12800 (DDR3L-1600) / 4GB*	M/B: AL553-TN-E3950 Rev.2 (021) CPU: [774-AL5531-600G/BSI291910001] DIMM Slot: Intel Atom x7-E3950 1.60GHz (SR33P) Test Summary: DIMM-1 Single Channel AIDA64 Cache and Memory Benchmark (V5. 97.4600) SINGLE CHANNEL (DIMM-1) READ:11457 MB/s WRITE:11400 MB/s COPY:10756 MB/s Passmark PerformanceTest 9.0 Build 1023 CPU Mark:2026.3 Memory Mark:911.8 3DMark for Windows (V 2.5.5029) 3 times Cloud Gate:2936 Ice Storm:22855 Sky diver:1759 Fire Strike:415	Pass
5	Apacer (78.B2GCL4210C 1.35V) [256Mx8b-x16/512Mx64b,CL=9] / ELPIDA (J2108ECSE-DJ-F) / PC3-10600 (DDR3L-1333) / 4GB*	M/B: AL553-TN-E3950 Rev.2 (021) CPU: [774-AL5531-600G/BSI291910001] DIMM Slot: Intel Atom x7-E3950 1.60GHz (SR33P) Test Summary: DIMM-1 Single Channel AIDA64 Cache and Memory Benchmark (V5. 97.4600) SINGLE CHANNEL (DIMM-1) READ:9475 MB/s WRITE:9534 MB/s COPY:9069 MB/s Passmark PerformanceTest 9.0 Build 1023 CPU Mark:1955.6 Memory Mark:864.4 3DMark for Windows (V 2.5.5029) 3 times Cloud Gate:2673 Ice Storm:18623 Sky diver:1631 Fire Strike:372	Pass

6	Transcend (TS512MSK64W6H 1.35V/1.5V) [512Mx8b-x8/512Mx64b,CL=11-11-11] / SEC (K4B4G0846D) / PC3L-12800(DDR3L-1600) / 4GB*	M/B: AL553-BN-N3350 Rev.2 (021) CPU: [774-AL5531-300G/BSI291610003] DIMM Slot: Intel Celeron N3350 1.10GHz (SR2Z7) Test Summary: DIMM-1 Single Channel AIDA64 Cache and Memory Benchmark (V5. 97.4600) SINGLE CHANNEL (DIMM-1) READ:10392 MB/s WRITE:9786 MB/s COPY:9735 MB/s Passmark PerformanceTest 9.0 Build 1023 CPU Mark:1286.3 Memory Mark:953.2 3DMark for Windows (V 2.5.5029) 3 times Cloud Gate:2138 Ice Storm:15570 Sky diver:1133 Fire Strike:332	Pass
7	Apacer (75.B83DL.G000C 1.35V/1.5V) [256Mx8b-x16/512Mx64b,CL=11] / Micron (2DM77-D9PFJ) / PC3L-12800 (DDR3L-1600) / 4GB*	M/B: AL553-BN-N3350 Rev.2 (021) CPU: [774-AL5531-300G/BSI291610003] DIMM Slot: Intel Celeron N3350 1.10GHz (SR2Z7) Test Summary: DIMM-1 Single Channel AIDA64 Cache and Memory Benchmark (V5. 97.4600) SINGLE CHANNEL (DIMM-1) READ:10643 MB/s WRITE:10262 MB/s COPY:10761 MB/s Passmark PerformanceTest 9.0 Build 1023 CPU Mark:1245.8 Memory Mark:952.6 3DMark for Windows (V 2.5.5029) 3 times Cloud Gate:1250 Ice Storm:10633 Sky diver:1082 Fire Strike:331	Pass
8	ADATA (ADDS1600W4G11-BMIE (10281820) 1.35V/1.5V) [512Mx8b-x8/512Mx64b,CL=11-11-11] / Micron (3DE77D9Q8J) / PC3L-12800 (DDR3L-1600) / 4GB*	M/B: AL553-BN-E3940 Rev.2 (021) CPU: [774-AL5531-100G/BSI291410004] DIMM Slot: Intel Atom x5-E3940 1.60GHz (SR33M) Test Summary: Test Summary: DIMM-1 Single Channel AIDA64 Cache and Memory Benchmark (V5. 97.4600) SINGLE CHANNEL (DIMM-1) READ:10156 MB/s WRITE:10213 MB/s COPY:9639 MB/s Passmark PerformanceTest 9.0 Build 1023 CPU Mark:875.4 Memory Mark:502.1 3DMark for Windows (V 2.5.5029)3 times Cloud Gate:1733 Ice Storm:12932 Sky diver:1056 Fire Strike:302	Pass
9	DDR3-1600/ TLA-AD3SSW4GB1WB-DKGCEL/ SEC-K4B4G1646E-BYMA/ 4GB*	M/B: AL553-BN-E3940 Rev.2 (021) CPU: [774-AL5531-100G/BSI291410004] DIMM Slot: Intel Atom x5-E3940 1.60GHz (SR33M) Test Summary: DIMM-1 Single Channel AIDA64 Cache and Memory Benchmark (V5. 97.4600) SINGLE CHANNEL (DIMM-1) READ:10477 MB/s WRITE:10779 MB/s COPY:10152 MB/s Passmark PerformanceTest 9.0 Build 1023 CPU Mark:893.4 Memory Mark:501.7 3DMark for Windows (V 2.5.5029) 3 times Cloud Gate:1780 Ice Storm:13263 Sky diver:1097 Fire Strike:315	Pass

10	<p>ADATA (ADDS1600C2G11-BHYE (10281881) 1.35V/1.5V) [256Mx8b-x8/256Mx64b,CL=11-11-11] / Hynix(SK) (H5TC2G83EFR PBA) / PC3L-12800(DDR3L-1600) / 2GB*</p>	<p>M/B: AL553-TN-E3950 Rev.2 (021) CPU: [774-AL5531-600G/BSI291910001] DIMM Slot: Intel Atom x7-E3950 1.60GHz (SR33P) Test Summary: DIMM-1 Single Channel AIDA64 Cache and Memory Benchmark (V5. 97.4600) SINGLE CHANNEL (DIMM-1) READ:11251 MB/s WRITE:10866 MB/s COPY:9704 MB/s Passmark PerformanceTest 9.0 Build 1023 CPU Mark:1980.6 Memory Mark:795.1 3DMark for Windows (V 2.5.5029) 3 times Cloud Gate:2783 Ice Storm:21403 Sky diver:1751 Fire Strike:382</p>	Pass
11	<p>Transcend (TS256MSK64W3N 1.35V/1.5V) [256Mx8b-x8/256Mx64b,CL=9] / Hynix (H5TQ2G83BFR-H9C) / PC3-10600 (DDR3L-1333) / 2GB*</p>	<p>M/B: AL553-TN-E3950 Rev.2 (021) CPU: [774-AL5531-600G/BSI291910001] DIMM Slot: Intel Atom x7-E3950 1.60GHz (SR33P) Test Summary: DIMM-1 Single Channel AIDA64 Cache and Memory Benchmark (V5. 97.4600) SINGLE CHANNEL (DIMM-1) READ:9401 MB/s WRITE:9055 MB/s COPY:8554 MB/s Passmark PerformanceTest 9.0 Build 1023 CPU Mark:1942.2 Memory Mark:745.6 3DMark for Windows (V 2.5.5029) 3 times Cloud Gate:2596 Ice Storm:19686 Sky diver:1599 Fire Strike:354</p>	Pass
12	<p>Crucial (CT25664BF1339.8FMR (MT8KTF25664HZ-1G4M1) 1.35V/1.5V) [256Mx8b-x8/256Mx64b,CL=9] / Micron (2EM77D9PFJ) / PC3L-10600 (DDR3L-1333) / 2GB*</p>	<p>M/B: AL553-BN-N3350 Rev.2 (021) CPU: [774-AL5531-300G/BSI291610003] DIMM Slot: Intel Celeron N3350 1.10GHz (SR2Z7) Test Summary: DIMM-1 Single Channel AIDA64 Cache and Memory Benchmark (V5. 97.4600) SINGLE CHANNEL (DIMM-1) READ:8880 MB/s WRITE:8983 MB/s COPY:8651 MB/s Passmark PerformanceTest 9.0 Build 1023 CPU Mark:1255 Memory Mark:790.3 3DMark for Windows (V 2.5.5029) 3 times Cloud Gate:2023 Ice Storm:14906 Sky diver:1077 Fire Strike:299</p>	Pass
13	<p>INNODISK (M3SP-2GMJCL0C-M 1.35V/1.5V) [256Mx8b-x8/256Mx64b,CL=9] / Micron (1WM77-D9PFJ) / PC3L-12800 (DDR3L-1600) / 2GB*</p>	<p>M/B: AL553-BN-E3940 Rev.2 (021) CPU: [774-AL5531-100G/BSI291410004] DIMM Slot: Intel Atom x5-E3940 1.60GHz (SR33M) Test Summary: DIMM-1 Single Channel AIDA64 Cache and Memory Benchmark (V5. 97.4600) SINGLE CHANNEL (DIMM-1) READ:10141 MB/s WRITE:10220 MB/s COPY:9531 MB/s Passmark PerformanceTest 9.0 Build 1023 CPU Mark:876 Memory Mark:459.9 3DMark for Windows (V 2.5.5029) 3 times Cloud Gate:1724 Ice Storm:13072 Sky diver:1037 Fire Strike:300</p>	Pass