

1. Stability Test:

1.1 CPU Function Test:

Test Purpose	Test CPU functions work normally under Windows Operating System
Test Procedure	1. Install Windows operating system 2. Install M/B device drivers 3. Using CPU-Z check CPU info 4. Run AIDA64 Cache and Memory Benchmark Ver.5.90.4200 1 time 5. Run Passmark Performance Test 9.0 Build1013 1 time 6. Run 3DMark for Windows Ver.2.3.3693 BenchMark 3 times 7. S3/Hibernate Test 3 times
Test Criteria	It should be correct for each test step

No.	CPU	Type	Idle CPU Temp.	Result
1	Intel / 1.6GHz	Atom-E3950 (Ap lloLake/QMM1) / 12W / BGA1296	32 °C	Pass
2	Intel / 1.6GHz	Atom-E3940 (Ap lloLake/QMLZ) / 9W / BGA1296	29 °C	Pass
3	Intel / 1.3GHz	Atom-E3930 (Ap lloLake/QMM2) / 6.5W / BGA1296	30 °C	Pass
4	Intel / 1.1GHz	Celeron-N3350 (polloLake/QKT4) / 6W / BGA1296	29 °C	Pass

1.1.1 Application Test:

No.	Software	Test Keypoint	Result
1	PassMark Memtest86 V7.4 Pro	1. Burn-In test 24 hours.	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.5.92.4300 - 1 time 4. Run Passmark Performance Test 9.0 Build1019 1 time 5. Run 3DMark for Windows Ver.2.4.3819 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 DDR3:

No.	Function	Result
1	DDR3 DIMM Slot Examine	Pass
2	Single Channel mode	Pass
3	Warning beep sound when no memory install	Pass
4	DIMM Slot1	Pass

1.2.2 Application Test:

No.	Software	Test Keypoint	Result
1	PassMark Memtest86 V7.4 Pro	1. Burn-In test 24 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)	2RD27-D9PCP	CT102464BF160B.16 FDD (MT16KTF1G64HZ-1 G6D1) 1.35/1.5V [512Mx8b-x16/1024 Mx64b,CL=11-11-11-30]	Pass
2	TLA	SK hynix	8GB	PC3L-12800 (DDR3L-1600)	H5TC4G83DFR-PBA	AD3SHT8GSAWB-CK GDL	Pass
3	ADATA	Micron	8GB	PC3L-12800 (DDR3L-1600)	3DE77D9Q8J	ADDS1600W8G11-B MIE (10281788) 1.35V/1.5V[512Mx8b-x16/1GBx64b, CL=11-11-11]	Pass
4	Apacer	Micron	4GB	PC3L-12800 (DDR3L-1600)	2ED27-D9PCP	75.C93DL.G000C 1.3 5V/1.5V [512Mx8b-x16/1024 Mx64b,CL=11]	Pass
5	Apacer	ELPIDA	4GB	PC3L-10600 (DDR3L-1333)	J2108ECSE-DJ-F	78.B2GCL4210C 1.35V [256Mx8b-x16/512M x64b,CL=9]	Pass
6	ADATA	Micron	4GB	PC3L-12800 (DDR3L-1600)	3DE77D9Q8J	ADDS1600W4G11-B MIE (10281820) 1.35V/1.5V[512Mx8 b-x8/512Mx64b, CL=11-11-11]	Pass
7	TLA	SK hynix	4GB	PC3L-12800 (DDR3L-1600)	H5TC4G83DFR-PBA	AD3SHT4GG5WB-CK GDL	Pass
8	Crucial	Micron	4GB	PC3L-12800 (DDR3L-1600)	2RM77-D9PFJ	CT51264BF160B.16F MR (MT16KTF51264HZ- 1G6M1) 1.35V/1.35V [256Mx8b-x16/512Mx64b,CL=11-11-11-30]	Pass
9	Transcend	SEC	4GB	PC3L-12800 (DDR3L-1600)	K4B4G0846D	TS512MSK64W6H 1.35V/1.5V [512Mx8b-x8/512Mx 64b,CL=11-11-11]	Pass
10	Crucial	Micron	2GB	PC3L-10600 (DDR3L-1333)	2EM77D9PFJ	CT25664BF1339.8FM R(MT8KTF25664H Z-1 4M1) 1.35V/1.5 V[56Mx8b-x8/256Mx64b,CL=9]	Pass

1.2.4 DDR3 SO-DIMM Test Procedures:

No.	DDR3 Module	Test Procedures	Result
1	PC3L-12800 (DDR3L-1600)/ Crucial- CT102464BF160B.16FDD / Micron- 2RD27-D9PCP / 8GB*	<p>Test Summary: Environment Temp.:23.2°C CPU Temp.:32.0°C CPU Temp. after 3DMark:35.0°C</p> <p>AIDA64 Cache and Memory Benchmark(V5.92.4300) SINGLE CHANNEL(Dimm-1) READ:11430 MB/s WRITE:11402 MB/s COPY:10772 MB/s</p> <p>Passmark PerformanceTest 9.0 Build 1019 CPU Mark:2116.1 Memory Mark:989</p> <p>3DMark for Windows(V 2.4.3819)3times Cloud Gate:1947 Ice Storm:15966 Sky diver:1635 Fire Strike:393</p>	Pass
2	PC3L-12800 (DDR3L-1600)/ TLA- AD3SHT8GSAWB-CKGDL/ SK Hynix- H5TC4G83DFR-PBA/ 8GB*	<p>CPU: Intel Atom Processor E3930 @ 1.30GHz Test Summary: Environment Temp.:24.5°C CPU Temp.:30.0°C CPU Temp. after 3DMark:41.0°C</p> <p>AIDA64 Cache and Memory Benchmark(V5.92.4300) SINGLE CHANNEL(Dimm-1) READ:10367 MB/s WRITE:9772 MB/s COPY:10823 MB/s</p> <p>Passmark PerformanceTest 9.0 Build 1019 CPU Mark:1042 Memory Mark:895.8</p> <p>3DMark for Windows(V 2.4.3819)3times Cloud Gate:1911 Ice Storm:13818 Sky Diver:1007 Fire Strike:299</p>	Pass
3	ADATA (ADDS1600W8G11-BMIE (10281788) 1.35V/1.5V) [512Mx8b-x16/1GBx64b,CL=11-11- 11] / Micron (3DE77D9Q8J) / PC3L-12800 (DDR3L-1600) / 8GB*	<p>CPU: Intel Celeron CPU N3350 @ 1.10GHz Test Summary: Environment Temp.:24.7°C CPU Temp.:31.0°C CPU Temp. after 3DMark:40.0°C</p> <p>AIDA64 Cache and Memory Benchmark(V5.92.4300) SINGLE CHANNEL(Dimm-1) READ:10664 MB/s WRITE:10257 MB/s COPY:10708 MB/s</p> <p>Passmark PerformanceTest 9.0 Build 1019 CPU Mark:1292.8 Memory Mark:1054.8</p> <p>3DMark for Windows(V 2.4.3819)3times Cloud Gate:2235 Ice Storm:16006 Sky Diver:1188 Fire Strike:317</p>	Pass

4	Apacer (75.C93DL.G000C 1.35V/1.5V) [512Mx8b-x16/1024Mx64b,CL=11] / Micron (2ED27-D9PCP) / PC3L-12800 (DDR3L-1600) / 8GB*	<p>CPU: Intel Atom Processor E3940 @ 1.60GHz Test Summary: Environment Temp.:24.9°C CPU Temp.:31.0°C CPU Temp. after 3DMark:38.0°C</p> <p>AIDA64 Cache and Memory Benchmark(V5.92.4300) SINGLE CHANNEL(Dimm-1) READ:11451 MB/s WRITE:11395 MB/s COPY:10775 MB/s</p> <p>Passmark PerformanceTest 9.0 Build 1019 CPU Mark:1909.5 Memory Mark:923.6 3DMark for Windows(V 2.4.3819) 3 times Cloud Gate:2540 Ice Storm:16625 Sky Diver:1131 Fire Strike:315</p>	Pass
5	Apacer (78.B2GCL4210C 1.35V) [256Mx8b-x16/512Mx64b,CL=9] / ELPIDA (J2108ECSE-DJ-F) / PC3-10600 (DDR3L-1333) / 4GB*	<p>CPU: Intel Celeron CPU N3350 @ 1.10GHz Test Summary: Environment Temp.:23.8°C CPU Temp.:29.0°C CPU Temp. after 3DMark:41.0°C</p> <p>AIDA64 Cache and Memory Benchmark(V5.92.4300) SINGLE CHANNEL(Dimm-1) READ:9092 MB/s WRITE:9694 MB/s COPY:9181 MB/s</p> <p>Passmark PerformanceTest 9.0 Build 1019 CPU Mark:928.1 Memory Mark:275.5</p> <p>3DMark for Windows(V 2.4.3819) 3 times Cloud Gate:2103 Ice Storm:15254 Sky Diver:1093 Fire Strike:309</p>	Pass
6	ADATA (ADDS1600W4G11-BMIE (10281820) 1.35V/1.5V) [512Mx8b-x8/512Mx64b,CL=11-11- 11] / Micron (3DE77D9Q8J) / PC3L-12800 (DDR3L-1600) / 4GB*	<p>Test Summary: Environment Temp.:23.6°C CPU Temp.:28.0°C CPU Temp. after 3DMark:45.0°C</p> <p>AIDA64 Cache and Memory Benchmark(V5.92.4300) SINGLE CHANNEL(Dimm-1) READ:11279 MB/s WRITE:10926 MB/s COPY:9716 MB/s</p> <p>Passmark PerformanceTest 9.0 Build 1019 CPU Mark:2085.5 Memory Mark:902.9</p> <p>3DMark for Windows(V 2.4.3819)3times Cloud Gate:2794 Ice Storm:21649 Sky Diver:1790 Fire Strike:372</p>	Pass
7	PC3L-12800 (DDR3L-1600) / TLA- AD3SHT4GG5WB-CKGDL/ SK hynix- H5TC4G83DFR-PBA/ 4GB*	<p>Test Summary: Environment Temp.:23.2°C CPU Temp.:29.0°C CPU Temp. after 3DMark:33.0°C</p> <p>AIDA64 Cache and Memory Benchmark(V5.92.4300) SINGLE CHANNEL(Dimm-1) READ:11274 MB/s WRITE:10899 MB/s COPY:9741 MB/s</p> <p>Passmark PerformanceTest 9.0 Build 1019 CPU Mark:2088.3 Memory Mark:900.7</p> <p>3DMark for Windows(V 2.4.3819) 3 times Cloud Gate:2293 Ice Storm:11999 Sky Diver:1439 Fire Strike:322</p>	Pass

8	<p>Crucial (CT51264BF160B.16FMR (MT16KTF51264HZ-1G6M1) 1.35V/1.5V) [256Mx8b-x16/512Mx64b,CL=11-11- 11-30] / Micron (2RM77D9PFJ) / PC3L-12800 (DDR3L-1600) / 4GB*</p>	<p>Test Summary: Environment Temp.:22.1°C CPU Temp.:31.0°C CPU Temp. after 3DMark:34.0°C</p> <p>AIDA64 Cache and Memory Benchmark(V5.92.4300) SINGLE CHANNEL(Dimm-1) READ:9855 MB/s WRITE:9440 MB/s COPY:9268 MB/s</p> <p>Passmark PerformanceTest 9.0 Build 1019 CPU Mark:2091.7 Memory Mark:892.7</p> <p>3DMark for Windows(V 2.4.3819) 3 times Cloud Gate:2490 Ice Storm:13298 Sky Diver:1611 Fire Strike:357</p>	Pass
9	<p>Transcend (TS512MSK64W6H 1.35V/1.5V) [512Mx8b-x8/512Mx64b,CL=11-11- 11] / SEC (K4B4G0846D) / PC3L- 12800(DDR3L-1600) / 4GB*</p>	<p>Test Summary: Environment Temp.:23.7°C CPU Temp.:31.0°C CPU Temp. after 3DMark:35.0°C</p> <p>AIDA64 Cache and Memory Benchmark(V5.92.4300) SINGLE CHANNEL(Dimm-1) READ:9553 MB/s WRITE:8242 MB/s COPY:8538 MB/s</p> <p>Passmark PerformanceTest 9.0 Build 1019 CPU Mark:2012.6 Memory Mark:869.1</p> <p>3DMark for Windows(V 2.4.3819) 3 times Cloud Gate:2321 Ice Storm:11951 Sky Diver:1440 Fire Strike:322</p>	Pass
10	<p>Crucial (CT25664BF1339.8FMR (MT8KTF25664HZ-1G4M1) 1.35V/1.5V) [256Mx8b-x8/256Mx64b,CL=9] / Micron (2EM77D9PFJ) / PC3L-10600 (DDR3L-1333) / 2GB*</p>	<p>CPU: Intel Celeron CPU N3350 @ 1.10GHz Test Summary: Environment Temp.:22.2°C CPU Temp.:31.0°C CPU Temp. after 3DMark:33.0°C</p> <p>AIDA64 Cache and Memory Benchmark(V5.92.4300) SINGLE CHANNEL(Dimm-1) READ:8882 MB/s WRITE:9235 MB/s COPY:8678 MB/s</p> <p>Passmark PerformanceTest 9.0 Build 1019 CPU Mark:1264.3 Memory Mark:778.1</p> <p>3DMark for Windows(V 2.4.3819)3times Cloud Gate:2034 Ice Storm:14883 Sky Diver:1085 Fire Strike:284</p>	Pass