

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. 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.2.2.3509 BenchMark - 3 times 7. S3(Sleep)/S4(Hibernate)/S5(Shutdown) test - 3 times
Test Criteria	It should be correct for each test step

No.	CPU	Type	CPU Temp.	Result
1	Intel / 1.6GHz	Atom-E3950 (ApolloLake/QMM1) / 12W / BGA1296	34.0°C	Pass
2	Intel / 1.6GHz	Atom-E3040 (ApolloLake/QMLZ) / 9.5W / BGA1296	30.0°C	Pass
3	Intel / 1.3GHz	Atom-E3930 (ApolloLake/QLGT) / 6W / BGA1296	32.0°C	Pass
4	Intel / 1.1GHz	Celeron-N3350 (ApolloLake/QKT4) 6W / BGA1296	45.0°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 Driver 3. Run AIDA64 Cache and Memory Benchmark Ver.5.90.4200 - 1 time 4. Run Passmark Performance Test 9.0 Build1023 1 time 5. Run 3DMark for Windows Ver.2.4.4264 BenchMark - 3 times 6. S3/Hibernate Test - 3 times
Test Criteria	It should be no problem for the test

1.2.1 DDR3:

No.	Function	Result
1	Single Channel mode	Pass

1.2.2 Application Test:

No.	Software	Test Keypoint	Result
1	MemTest86 Ver.7.4 Pro	1. Stress test 12 hours.	Pass

1.2.3 DDR4 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) 1.35V/1.5V [512Mx8b-x16/102 4Mx64b,CL=11-11-11-30]	Pass
2	Apacer	Micron	8GB	PC3L-12800 (DDR3L-1600)	2ED27 D9PCP	75.C93DL.G000C 1.35V/1.5V [512Mx8b-x16/102 4Mx64b,CL=11]	Pass
3	ADATA	Micron	8GB	PC3L-12800 (DDR3L-1600)	3DE77D9Q8J	A DS1600W8G11- BMIE (10281788) 1.35V/1.5V [512Mx8b-x16/1G Bx64b,CL=11-11-11]	Pass
4	TLA	Sk hynix	8GB	PC3L-12800 (DDR3L-1600)	H5TC4G83DFR-PBA	A 3SHT8GSAWB- CKGDL	Pass
5	Apacer	ELPIDA	4GB	PC3-10600 (DDR3L-1333)	J2108ECSE-DJ-F	78.B2GCL4210C 1.35V [256Mx8b-x16/512 Mx64b,CL=9]	Pass
6	Transcend	SEC	4GB	PC3L-12800 (DDR3L-1600)	K4B4G0846D-XYK0	TS512MSK64W6H 1.35V/1.5V [512Mx8b-x8/512 Mx64b,CL=11-11-11]	Pass
7	INNODISK	Micron	2GB	PC3L-12800 (DDR3L-1600)	1WM77-D9PFJ	M3SP-2GMJCL0C-M 1.35V/1.5V [256Mx8b-x8/256Mx64b,CL=9]	Pass

1.2.4 DDR4 Module Test Procedures:

No.	DDR4 Module	Test Procedures	Result
1	PC3-12800(DDR3L-1600)Crucial/Micron/8GB* (2Rank,CT102464BF160B.16FDD.MT16KTF1G 64HZ-1G6D1,2RD27D9PCP,1.35V & 1.5V,Low Voltage Module,512Mx8b-x16/1024Mx64b, CL=11-11-11-30,Unbuffer Non-ECC,RoHS)	DIMM Slot: DIMM-1 SINGLE Channel Test Summary: Environment Temp.:25.5°C CPU Temp.:34.0°C CPU Temp. after 3DMark:56.0°C AIDA64 Cache and Memory Benchmark(V5. 92.4300) SINGLE CHANNEL(DIMM- 1) READ:11468 MB/s WRITE:11430 MB/s COPY:10757 MB/s Passmark Performance Test 9.0 Build 1019 CPU Mark:1766.2 Memory Mark:986.3 3DMark for Windows(V 2.4.3819)3times Cloud Gate:1943 Ice Storm Extreme:15977 Skydiver:1642 Fire Strike:392	Pass
2	PC3L-12800 (DDR3L-1600) / Apacer-75.C93DL.G000C 1.35V/1.5V [512Mx8b-x16/1024Mx64b,CL=11] / Micron-2ED27-D9PCP / 8GB*	M/B: AL051-BC-E3940 Rev.2(021) (BSH380510005) CPU: Intel Atom Processor E3940 @ 1.60GHz(QM LZ) DIMM Slot: DIMM-1 Single Channel Test Summary: Environment Temp.:26.2°C CPU Temp.:30.0°C CPU Temp. after 3DMark:30.0 °C AIDA64 Cache and Memory Benchmark(V5. 92.4300) SINGLE CHANNEL(DIMM- 1) READ:9724 MB/s WRITE:9561 MB/s COPY:9395 MB/s Passmark PerformanceTest 9.0 Build 1019 CPU Mark:1900.1 Memory Mark:904.5 3DMark for Windows(V 2.4.3819)3times Cloud Gate:1629 Ice Storm Extreme:8700 Sky diver:998 Fire Strike:286	Pass
3	PC3L-12800 (DDR3L-1600) / ADATA-ADDS1600W8G11-BMIE (10281788) 1.35V/1.5V[512Mx8b-x16/ 1GBx64b,CL=11-11-11] / Micron-3DE77D9Q8J / 8GB*	DIMM Slot: DIMM-1 Single Channel Test Summary: Environment Temp.:26.2°C CPU Temp.:36.0°C CPU Temp. after 3DMark:37.0 °C AIDA64 Cache and Memory Benchmark(V5. 92.4300) SINGLE CHANNEL(DIMM- 1) READ:11434 MB/s WRITE:11412 MB/s COPY:10747 MB/s Passmark PerformanceTest 9.0 Build 1019 CPU Mark:2133.1 Memory Mark:991.2 3DMark for Windows(V 2.4.3819)3times Cloud Gate:2938 Ice Storm Extreme:22806 Sky diver:1777 Fire Strike:407	Pass

4	PC3L-12800 (DDR3L-1600) / TLA- AD3SHT8GSAWB-CKGDL / Sk hynix- H5TC4G83DFR-PBA / 8GB*	DIMM Slot: DIMM-1 Single Channel Test Summary: Environment Temp.:25.4°C CPU Temp.:35.0°C CPU Temp. after 3DMark:52.0 °C AIDA64 Cache and Memory Benchmark(V5. 92.4300) SINGLE CHANNEL(DIMM- 1) READ:11483 MB/s WRITE:11417 MB/s COPY:10783 MB/s Passmark PerformanceTest 9.0 Build 1019 CPU Mark:2136.7 Memory Mark:992.8 3DMark for Windows(V 2.4.3819)3times Cloud Gate:2950 Ice Storm Extreme:22760 Sky diver:1776 Fire Strike:407	Pass
5	PC3-10600(DDR3L-1333) / Apacer-78.B2GCL4210C 1.35V [256Mx8b- x16/512Mx64b,CL=9] / ELPIDA- J2108ECSE-DJ-F/ 4GB*	M/B: AL051-BC-N3350 Rev.2(0 1) (BSH380710001) CPU: Intel Celeron CPU N3350 @ 1.10GHz(QKT4) DIMM Slot: DIMM-1 Single Channel Test Summary: Test Summary: Environment Temp.:26.0°C CPU Temp.:45.0°C CPU Temp. after 3DMark:48.0°C AIDA64 Cache and Memory Benchmark(V5. 92.4300) SINGLE CHANNEL(DIMM- 1) READ:9178 MB/s WRITE:9634 MB/s COPY:9184 MB/s Passmark PerformanceTest 9.0 Build 1019 CPU Mark:1237.8 Memory Mark:895.9 3DMark for Windows(V 2.4.3819)3times Cloud Gate:2107 Ice Storm Extreme:15182 Sky diver:1115 Fire Strike:308	Pass
6	PC3L-12800 (DDR3L-1600)/ Transcend- TS512MSK64W6H 1.35V/1.5V [512Mx8b-x8/512Mx64b,CL=11-11-11]/ 4GB*	M/B: AL051-TC-E3930 (Rev.2) 021) (BSH380910 004) CPU: Intel Atom Processor E3930 @ 1.30GHz (QL GT) DIMM Slot: DIMM-1 Single Channel Test Summary: Environment Temp.:26.7°C CPU Temp.:35.0°C CPU Temp. after 3DMark:51.0°C AIDA64 Cache and Memory Benchmark(V5. 92.4300) SINGLE CHANNEL(DIMM- 1) READ:10134 MB/s WRITE:9311 MB/s COPY:9758 MB/s Passmark PerformanceTest 9.0 Build 1019 CPU Mark:1027.6 Memory Mark:842.4 3DMark for Windows(V 2.4.3819)3times Cloud Gate:1857 Ice Storm Extreme:13464 Sky diver:987 Fire Strike:283	Pass

7	PC3L-12800 (DDR3L-1600)/ INNODISK- M3SP-2GMJCL0C-M 1.35V/ 1.5V[256Mx8b-x8/256Mx64b,CL=9]/ Micron-1WM77-D9PFJ/ 2GB*	M/B: AL051-TC-E3930 Rev.2(021) (BSH380910004) CPU: Intel Atom Processor E3930 @ 1.30GHz (QL GT) DIMM Slot: DIMM-1 Single Channel Test Summary: Environment Temp.:26.4°C CPU Temp.:34.0°C CPU Temp. after 3DMark:35.0°C AIDA64 Cache and Memory Benchmark(V5. 92.4300) SINGLE CHANNEL(DIMM- 1) READ:9764 MB/s WRITE:8796 MB/s COPY:9200 MB/s Passmark PerformanceTest 9.0 Build 1019 CPU Mark:1023.5 Memory Mark:754.1 3DMark for Windows(V 2.4.3819)3times Cloud Gate:1811 Ice Storm Extreme:12780 Sky diver:977 Fire Strike:266	Pass
---	--	--	------