

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 PassMark BurnInTest 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 / 4.20GHz	Core i7-7700K (Kabylake / SR33A) / 91W / LGA1151	58.0°C	70.0°C	Pass
2	Intel / 3.60GHz	Core i7-7700 (Kabylake / SR338) / 65W / LGA1151	57.5°C	65.0°C	Pass
3	Intel / 4.00GHz	Core i3-7300 (Kabylake / SR359) / 51W / LGA1151	54.5°C	58.0°C	Pass
4	Intel / 3.50GHz	Core i5-7600 (Kabylake / SR334) / 65W / LGA1151	50.0°C	68.0°C	Pass
5	Intel / 2.40GHz	Core i7-6700TE (Skylake-S/R0-SR2LP) / 35W / LGA1151	27.0°C	38.0°C	Pass
6	Intel / 4.00GHz	Core i7-6700K (Skylake-S/R0-SR2L0) / 91W / LGA1151	55.0°C	65.0°C	Pass
7	Intel / 3.40GHz	Core i7-6700 (Skylake-S/R0-SR2BT) / 65W / LGA1151	43.0°C	56.0°C	Pass
8	Intel / 3.20GHz	Core i5-6500 (Skylake-S/R0-SR2BX) / 65W / LGA1151	36.5°C	48.0°C	Pass
9	Intel / 2.30GHz	Core i5-6500TE (Skylake-S/R0-SR2LR) / 35W / LGA1151	30.5°C	38.0°C	Pass
10	Intel / 2.70GHz	Core i3-6100TE (Skylake-S/R0-SR2LS) / 35W / LGA1151	32.0°C	37.0°C	Pass
11	Intel / 3.70GHz	Core i3-6100 (Skylake-S/S0-SR2HG) / 51W / LGA1151	47.5°C	50.0°C	Pass
12	Intel / 3.30GHz	Pentium-G4400 (Skylake-S/R0-SR2DC) / 54W / LGA1151	39.0°C	42.0°C	Pass
13	Intel / 2.40GHz	Pentium-G4400TE (Skylake-S/R0-SR2LT) / 35W / LGA1151	28.5°C	35.0°C	Pass
14	Intel / 2.80GHz	Celeron G3900 (Skylake-S/S0-SR2HV) / 51W / LGA1151	32.5°C	36.0°C	Pass
15	Intel / 2.30GHz	Celeron G3900TE (Skylake-S/R0-SR2LU) / 35W / LGA1151	28.0°C	35.0°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.5.97.4600 1 time 4. Run Passmark Performance Test 9.0 Build1029 1 time 5. Run 3DMark for Windows Ver.2.6.6238 BenchMark 3 times 6. S3/Hibernate Test 3 times
Test Criteria	It should be no problem for the test

1.2.1 DDR4:

No.	Function	Result
1	DDR4 DIMM Slot Examine	Pass
2	Single Channel mode	Pass
3	Dual channel mode	Pass
4	Warning beep sound when no memory install	Pass

1.2.2 Application Test:

No.	Software	Test Keypoint	Test Environment	Result
1	MemTest86 Ver.8.1 Pro	1. Stress test 24 hours.	DDR4: PC4-19200 (DDR4-2400) / Kingston-CBD24D4U7D8ME-16 / Micron-7TE77 D9VPP / 16GB*4 (Non ECC) (1070108C-2/4) (DIMM-1/2) DUAL Channel O.S.: DOS	Pass

1.2.3 DDR4 Approved List:

No.	Brand	Chip	Size	Type	Chip Model No.	Vendor Part No.	Result
1	Kingston	Micron	16GB	PC4-19200 (DDR4-2400)	7TE77 D9VPP	CBD24D4U7D8ME-16	Pass
2	Kingston	Micron	8GB	PC4-19200 (DDR4-2400)	7TE77 D9VPP	CBD24D4U7S8ME-8	Pass
3	Kingston	Micron	4GB	PC4-19200 (DDR4-2400)	7QE75 D9WFH	CBD24D4U7S1ME-4	Pass
4	Transcend	Samsung	16GB	PC4-19200 (DDR4-2400)	K4A8G085wB-BCRC	TS2GLH64V4B	Pass
5	ADATA	SK Hynix	16GB	PC4-19200 (DDR4-2400)	H5AN8G8NAFR UHC	AD4U240038G17-BHYA	Pass



1.2.4 DDR4 Test Procedures:

No.	DDR4 Module	Test Environment		Result
1	PC4-19200 (DDR4-2400) / Kingston-CBD24D4U7D8ME-16 / Micron-7TE77 D9VPP / 16GB*2 (Non ECC)	M/B: CPU: DIMM Slot: Test Summary:	KD171-Q170 Intel (R) Core (TM) i7-7700K CPU @ 4.20GHz (SR33A) (DIMM-1/2) Dual Channel AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1/2) READ:34942 MB/s WRITE:36369 MB/s COPY:33685 MB/s Passmark PerformanceTest 9.0 Build 1029 CPU Mark:12495.8 Memory Mark:3170.6 3DMark for Windows(V 2.6.6238)3times Cloud Gate:10929 Ice Storm Extreme:64737 Skydiver:5131 Fire Strike:1293	Pass
2	PC4-19200 (DDR4-2400) / Kingston-CBD24D4U7S8ME-8 / Micron-7TE77 D9VPP / 8GB*1 (Non ECC)	M/B: CPU: DIMM Slot: Test Summary:	KD171-Q170 Intel Core i3-6100 Processor 3.70GHz(SR2HG) (CP070-2) (DIMM-1) Single Channel AIDA64 Cache and Memory Benchmark(V5.97.4600) SINGLE CHANNEL(DIMM-1) READ:15157 MB/s WRITE:15223 MB/s COPY:14959 MB/s Passmark PerformanceTest 9.0 Build 1029 CPU Mark:5474.9 Memory Mark:1971.8 3DMark for Windows(V 2.6.6238)3times Cloud Gate:6229 Ice Storm Extreme:38340 Skydiver: 3485 Fire Strike:786	Pass
3	PC4-19200 (DDR4-2400) / Kingston-CBD24D4U7S1ME-4 / Micron-7QE75 D9WFH / 4GB*2 (Non ECC)	M/B: CPU: DIMM Slot: Test Summary:	KD171-Q170 Intel Core i5-6500 Processor 3.20GHz(SR2BX) (CP071-3) (DIMM-1/2) Dual Channel AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1/2) READ:28092 MB/s WRITE:30775 MB/s COPY:26037 MB/s Passmark PerformanceTest 9.0 Build 1029 CPU Mark:7788.4 Memory Mark:2415.5 3DMark for Windows(V 2.6.6238)3times Cloud Gate:7640 Ice Storm Extreme:51269 Skydiver:4069 Fire Strike:976	Pass



4	PC4-19200 (DDR4-2400) / Transcend-TS2GLH64V4B / SEC-K4A8G085wB-BCRC / 16GB*2 (Non ECC)	<p>M/B: KD171-Q170 CPU: Intel Core i7-6700 Processor 3.40GHz (SR2BT) (CP072-4) DIMM Slot: (DIMM-1/2) Dual Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1/2) READ:31539 MB/s WRITE:32387 MB/s COPY:30464 MB/s</p> <p>Passmark PerformanceTest 9.0 Build 1029 CPU Mark:10800.7 Memory Mark:2844.3</p> <p>3DMark for Windows(V 2.6.6238)3times Cloud Gate:9902 Ice Storm Extreme:59058 Skydiver:4803 Fire Strike:1162</p>	Pass
5	PC4-19200 (DDR4-2400) / Kingston-CBD24D4U7D8ME-16 / Micron-7TE77 D9VPP / 16GB*2 (Non ECC)	<p>M/B: KD171-H110 CPU: Intel (R) Core (TM) i7-6700K CPU @ 4.00GHz (SR2L0) DIMM Slot: (DIMM-1/2) Dual Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1/2) READ:31269 MB/s WRITE:31957 MB/s COPY:30447 MB/s</p> <p>Passmark PerformanceTest 9.0 Build 1029 CPU Mark:11436.4 Memory Mark:2918.1</p> <p>3DMark for Windows(V 2.6.6238)3times Cloud Gate:10023 Ice Storm Extreme:60684 Skydiver: 4763 Fire Strike:1162</p>	Pass
6	PC4-19200 (DDR4-2400) / Kingston-CBD24D4U7S8ME-8 / Micron-7TE77 D9VPP / 8GB*2 (Non ECC)	<p>M/B: KD171-H110 CPU: Intel Pentium G4400 Processor 3.3GHz(SR2DC) (CP073-3) DIMM Slot: (DIMM-1/2) Dual Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1/2) READ:28582 MB/s WRITE:30935 MB/s COPY:26564 MB/s</p> <p>Passmark PerformanceTest 9.0 Build 1029 CPU Mark:3544.0 Memory Mark:2151.6</p> <p>3DMark for Windows(V 2.6.6238)3times Cloud Gate:4419 Ice Storm Extreme:27441 Skydiver: 2341 Fire Strike:610</p>	Pass
7	PC4-19200 (DDR4-2400) / Kingston-CBD24D4U7S8ME-8 / Micron-7TE77 D9VPP / 8GB*2 (Non ECC)	<p>M/B: KD171-H110 CPU: Intel Celeron G3900TE Processor 2.3GHz(SR2LU) (CP074-1) DIMM Slot: (DIMM-1/2) Dual Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1/2) READ:27013 MB/s WRITE:30612 MB/s COPY:25934 MB/s</p> <p>Passmark PerformanceTest 9.0 Build 1029 CPU Mark:2605.3 Memory Mark:2012.8</p> <p>3DMark for Windows(V 2.6.6238)3times Cloud Gate:3716 Ice Storm Extreme:24149 Skydiver: 2083 Fire Strike:547</p>	Pass



8	PC4-19200 (DDR4-2400) / Kingston-CBD24D4U7S8ME-8 / Micron-7TE77 D9VPP / 8GB*2 (Non ECC)	<p>M/B: KD171-H110 CPU: Intel Core i3-6100TE Processor 2.70GHz(SR2LS) (CP075-1) DIMM Slot: (DIMM-1/2) Dual Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1/2) READ:29172 MB/s WRITE:30349 MB/s COPY:25618 MB/s</p> <p>Passmark PerformanceTest 9.0 Build 1029 CPU Mark:4022.6 Memory Mark:1962.6</p> <p>3DMark for Windows(V 2.6.6238)3times Cloud Gate:6377 Ice Storm Extreme:45477 Skydiver: 3857 Fire Strike:955</p>	Pass
9	PC4-19200 (DDR4-2400) / Kingston-CBD24D4U7S1ME-4 / Micron-7QE75 D9WFH / 4GB*2 (Non ECC)	<p>M/B: KD171-Q170 CPU: Intel Core i7-6700TE Processor 2.40GHz (SR2LP) (CP076-1) DIMM Slot: (DIMM-1/2) Dual Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1/2) READ:28452 MB/s WRITE:30998 MB/s COPY:26320 MB/s</p> <p>Passmark PerformanceTest 9.0 Build 1029 CPU Mark:8879.5 Memory Mark:2290.5</p> <p>3DMark for Windows(V 2.6.6238)3times Cloud Gate:8248 Ice Storm Extreme:49159 Skydiver: 4036 Fire Strike:945</p>	Pass
10	PC4-19200 (DDR4-2400) / Kingston-CBD24D4U7S8ME-8 / Micron-7TE77 D9VPP / 8GB*2 (Non ECC)	<p>M/B: KD171-H110 CPU: Intel Pentium G4400TE Processor 2.4GHz (SR2LT) (CP077-1) DIMM Slot: (DIMM-1/2) Dual Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1/2) READ:27295 MB/s WRITE:30713 MB/s COPY:26374 MB/s</p> <p>Passmark PerformanceTest 9.0 Build 1029 CPU Mark:2749.7 Memory Mark:2096.5</p> <p>3DMark for Windows(V 2.6.6238)3times Cloud Gate:3957 Ice Storm Extreme:24939 Skydiver: 2189 Fire Strike:575</p>	Pass
11	PC4-19200 (DDR4-2400) / Kingston-CBD24D4U7S8ME-8 / Micron-7TE77 D9VPP / 8GB*2 (Non ECC)	<p>M/B: KD171-H110 CPU: Intel Core i5-6500TE Processor 2.30GHz(SR2LR) (CP078-1) DIMM Slot: (DIMM-1/2) Dual Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1/2) READ:30037 MB/s WRITE:30496 MB/s COPY:24977 MB/s</p> <p>Passmark PerformanceTest 9.0 Build 1029 CPU Mark:7334.8 Memory Mark:2565.5</p> <p>3DMark for Windows(V 2.6.6238)3times Cloud Gate:7420 Ice Storm Extreme:51327 Skydiver: 4009 Fire Strike:997</p>	Pass

12	PC4-19200 (DDR4-2400) / Kingston-CBD24D4U7S8ME-8 / Micron-7TE77 D9VPP / 8GB*2 (Non ECC)	<p>M/B: KD171-H110 CPU: Intel Celeron G3900 Processor 2.8GHz(SR2HV) (CP078-1) DIMM Slot: (DIMM-1/2) Dual Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1/2) READ:28363 MB/s WRITE:31327 MB/s COPY:26790 MB/s</p> <p>Passmark PerformanceTest 9.0 Build 1029 CPU Mark:3131.6 Memory Mark:2338.1</p> <p>3DMark for Windows(V 2.6.6238)3times Cloud Gate:4160 Ice Storm Extreme:25769 Skydiver: 2206 Fire Strike:576</p>	Pass
13	PC4-19200 (DDR4-2400) / Kingston-CBD24D4U7S8ME-8 / Micron-7TE77 D9VPP / 8GB*2 (Non ECC)	<p>M/B: KD171-H110 CPU: Intel (R) Core (TM) i3-7300 CPU @ 4.00GHz (SR359) DIMM Slot: (DIMM-1/2) Dual Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1/2) READ:33236 MB/s WRITE:34930 MB/s COPY:29448 MB/s</p> <p>Passmark PerformanceTest 9.0 Build 1029 CPU Mark:6523.9 Memory Mark:2930.9</p> <p>3DMark for Windows(V 2.6.6238)3times Cloud Gate:8303 Ice Storm Extreme:56065 Skydiver: 4525 Fire Strike:1152</p>	Pass
14	PC4-19200 (DDR4-2400) / Kingston-CBD24D4U7S8ME-8 / Micron-7TE77 D9VPP / 8GB*2 (Non ECC)	<p>M/B: KD171-H110 CPU: Intel (R) Core (TM) i5-7600 CPU @ 3.50GHz (SR334) (CP086) DIMM Slot: (DIMM-1/2) Dual Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1/2) READ:33119 MB/s WRITE:35056 MB/s COPY:29689 MB/s</p> <p>Passmark PerformanceTest 9.0 Build 1029 CPU Mark:9316.2 Memory Mark:2947.8</p> <p>3DMark for Windows(V 2.6.6238)3times Cloud Gate:9450 Ice Storm Extreme:62899 Skydiver: 4918 Fire Strike:1243</p>	Pass
15	PC4-19200 (DDR4-2400) ADATA AD4U240038G17-BHYA / SK Hynix H5AN8G8NAFR UHC /8GB*2 (Non ECC)	<p>M/B: KD171-H110 CPU: Intel (R) Core (TM) i7-7700 CPU @ 3.60GHz (SR338) DIMM Slot: (DIMM-1/2) Dual Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1/2) READ:33299 MB/s WRITE:34957 MB/s COPY:30299 MB/s</p> <p>Passmark PerformanceTest 9.0 Build 1029 CPU Mark:11403.8 Memory Mark:2975.6</p> <p>3DMark for Windows(V 2.6.6238)3times Cloud Gate:10700 Ice Storm Extreme:62641 Skydiver: 5073 Fire Strike:1254</p>	Pass

