

1. Stability Test:

1.1 CPU Function Test:

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| 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. Check CPU temperature in BIOS setup menu 4. Run BurnIn Test 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 / 4.2GHz | Core i7-7700K (KabyLake/SR33A) / 91W / LGA1151 | 36.0°C | 61.0°C | Pass |
| 2 | Intel / 3.6GHz | Core i7-7700 (KabyLake / SR338) / 65W / LGA1151 | 36.0°C | 60.0°C | Pass |
| 3 | Intel / 3.5GHz | Core i5-7600 (KabyLake/SR334) / 65W / LGA1151 | 35.0°C | 58.0°C | Pass |
| 4 | Intel / 4.0GHz | Core i3-7300 (KabyLake/SR359) / 51W / LGA1151 | 35.0°C | 59.0°C | Pass |
| 5 | Intel / 4GHz | Core i7-6700K (SkyLake/SR2L0) / 91W / LGA1151 | 36.0°C | 60.0°C | Pass |
| 6 | Intel / 2.40GHz | Core i7-6700TE (Skylake/SR2LP) / 35W / LGA1151 | 35.5°C | 59.0°C | Pass |
| 7 | Intel / 2.30GHz | Core i5-6500TE (Skylake /SR2LR) / 35W / LGA1151 | 31.5°C | 56.0°C | Pass |
| 8 | Intel / 2.70GHz | Core i3-6100TE (Skylake/SR2LS) / 35W / LGA1151 | 33.5°C | 58.0°C | Pass |
| 9 | Intel / 3.30GHz | Pentium-G4400 (Skylake/SR2DC) / 54W / LGA1151 | 36.5°C | 58.0°C | Pass |
| 10 | Intel / 2.40GHz | Pentium-G4400TE (Skylake/SR2LT) / 35W / LGA1151 | 31.0°C | 56.0°C | Pass |
| 11 | Intel / 2.80GHz | Celeron G3900 (Skylake/SR2HV) / 51W / LGA1151 | 33.0°C | 58.0°C | Pass |
| 12 | Intel / 2.30GHz | Celeron G3900TE (Skylake/SR2LU) / 35W / LGA1151 | 29.5°C | 52.0°C | Pass |

1.1.1 Application Test:

| No. | Software | Test Keypoint | Result |
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| 1 | CPU-Z Ver.1.86.0 | 1. Check all information. | Pass |

1.2 Memory Function Test:

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| 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.2.4.4264 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 | PassMark MemTest86 V8.1 Pro | 1. Stress test 12 hours. | DDR4: DDR4-2400/Transcend-TS2GLH64V4B/SEC-K4A8G085WB-BCRC/ 16GB*2/DR041-1/2 (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 | Transcend | SEC | 16GB | DDR4-2400 | K4A8G085WB-BCRC | TS2GLH64V4B | Pass |
| 2 | Kingston | Micron | 16GB | DDR4-2400 | 7TE77D9VPP | CBD24D4U7D8ME-16 | Pass |
| 3 | Transcend | SEC | 16GB | DDR4-2666 | K4A8G085WC-BCTD | TS2GLH64V6B | Pass |
| 4 | Kingston | Micron | 8GB | DDR4-2400 | 7TE77D9VPP | CBD24D4U7S8ME-8 | Pass |
| 5 | Innodisk | SEC | 8GB | DDR4-2666 | K4A8G085WC-BCTD | M4UO-8GS1JCIK | Pass |
| 6 | Transcend | SEC | 8GB | DDR4-2666 | K4A8G085WC-BCTD | TS1GLH64V6B | Pass |

1.2.4 DDR4 Module Test Procedures:

| No. | DDR4 Module | Test Procedures | Result |
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| 1 | DDR4-2400/Transcend-TS2GLH64V4B/ SEC-K4A8G085WB-BCRC/16GB*2 | CPU: Intel Core i7-7700K CPU @ 4.20GHz (SR33A) DIMM Slot: DIMM-1/2 Dual Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1/2) READ:34667 MB/s WRITE:36862 MB/s COPY:34145 MB/s Passmark PerformanceTest 9.0 Build 1029 CPU Mark:12726.4 Memory Mark:3292.6 3DMark for Windows(V 2.6.6238)3times Cloud Gate:10741 Ice Storm:56905 Sky diver:5158 Fire Strike:1291 | Pass |
| 2 | DDR4-2400/Kingston- CBD24D4U7D8ME-16/ Micron-7TE77D9VPP/16GB*2 | CPU: Intel Core i7-7700K CPU @ 4.20GHz (SR33A) DIMM Slot: DIMM-1/2 Dual Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1/2) READ:34667 MB/s WRITE:36862 MB/s COPY:34145 MB/s Passmark PerformanceTest 9.0 Build 1029 CPU Mark:12726.4 Memory Mark:3292.6 3DMark for Windows(V 2.6.6238)3times Cloud Gate:10741 Ice Storm:56905 Sky diver:5158 Fire Strike:1291 | Pass |
| 3 | | CPU: Intel Core 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:32153 MB/s WRITE:32343 MB/s COPY:30542 MB/s Passmark PerformanceTest 9.0 Build 1029 CPU Mark:11394.5 Memory Mark:2966.8 3DMark for Windows(V 2.6.6238)3times Cloud Gate:9645 Ice Storm:54641 Sky diver:4806 Fire Strike:1183 | Pass |
| 4 | | CPU: Intel Core i7-6700TE CPU @ 2.40GHz (SR2LP) DIMM Slot: DIMM-1/2 Dual Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1/2) READ:30814 MB/s WRITE:32174 MB/s COPY:30510 MB/s Passmark PerformanceTest 9.0 Build 1029 CPU Mark:7340.8 Memory Mark:2132.3 3DMark for Windows(V 2.6.6238)3times Cloud Gate:7850 Ice Storm:45632 Sky diver:4151 Fire Strike:1042 | Pass |

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| 5 | DDR4-2400/Kingston-CBD24D4U7S8ME-8/ Micron-7TE77D9VPP/8GB*2 | CPU: Intel Core 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:33438 MB/s WRITE:35143 MB/s COPY:30201 MB/s Passmark PerformanceTest 9.0 Build 1029 CPU Mark:10352.1 Memory Mark:2802.8 3DMark for Windows(V 2.6.6238)3times Cloud Gate:9911 Ice Storm:54758 Sky diver:5055 Fire Strike:1258 | Pass |
| 6 | DDR4-2666/ Innodisk-M4UO-8GS1JCIK/ SEC- K4A8G085WC-BCTD/8GB* | CPU: Intel Core i3-7300 CPU @ 4.00GHz (SR359) DIMM Slot: DIMM-1 Single Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) SINGLE CHANNEL(DIMM-1) READ:17740 MB/s WRITE:17880 MB/s COPY:17768 MB/s Passmark PerformanceTest 9.0 Build 1029 CPU Mark:6141.4 Memory Mark:2249.6 3DMark for Windows(V 2.6.6238)3times Cloud Gate:6764 Ice Storm:39441 Sky diver:4020 Fire Strike:944 | Pass |
| 7 | DDR4-2666/ Transcend-TS1GLH64V6B/ SEC- K4A8G085WC-BCTD/8GB*2 | CPU: Intel Pentium CPU G4400 @ 3.30GHz (SR2DC) DIMM Slot: DIMM-1/2 Dual Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1/2) READ:29215 MB/s WRITE:31400 MB/s COPY:27066 MB/s Passmark PerformanceTest 9.0 Build 1029 CPU Mark:3734.7 Memory Mark:2621 3DMark for Windows(V 2.6.6238)3times Cloud Gate:4543 Ice Storm:26340 Sky diver:2385 Fire Strike:627 | Pass |
| 8 | DDR4-2400/Kingston-CBD24D4U7S8ME-8/ Micron-7TE77D9VPP/8GB*2 | CPU: Intel Pentium CPU G4400TE @ 2.40GHz (SR2LT) DIMM Slot: DIMM-1/2 Dual Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1/2) READ:28278 MB/s WRITE:31404 MB/s COPY:27005 MB/s Passmark PerformanceTest 9.0 Build 1029 CPU Mark:2749.6 Memory Mark:2116.3 3DMark for Windows(V 2.6.6238)3times Cloud Gate:3852 Ice Storm:23659 Sky diver:2204 Fire Strike:581 | Pass |

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| 9 | DDR4-2400/ Transcend-TS1GLH64V4H/ SEC-K4A4G085WE-BCRC/ 8GB* | CPU: DIMM Slot: Test Summary: Intel Celeron CPU G3900TE 2.30GHz (SR2LU) DIMM-1 Single Channel AIDA64 Cache and Memory Benchmark(V5.97.4600) SINGLE CHANNEL(DIMM-1) READ:16205 MB/s WRITE:16290 MB/s COPY:15810 MB/s Passmark PerformanceTest 9.0 Build 1029 CPU Mark:2479.2 Memory Mark:1759 3DMark for Windows(V 2.6.6238)3times Cloud Gate:3600 Ice Storm:21769 Sky diver:2069 Fire Strike:544 | Pass |
| 10 | DDR4-2400/ Kingston-CBD24D4U7S1ME-4/ Micron-7QE75D9WEH/ 4GB*2 | CPU: DIMM Slot: Test Summary: Intel Celeron CPU G3900 @ 2.30GHz (SR2HV) DIMM-1/2 Dual Channel AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1/2) READ:27177 MB/s WRITE:31605 MB/s COPY:26309 MB/s Passmark PerformanceTest 9.0 Build 1029 CPU Mark:3103.7 Memory Mark:2192 3DMark for Windows(V 2.6.6238)3times Cloud Gate:4036 Ice Storm:24149 Sky diver:2209 Fire Strike:517 | Pass |
| 11 | DDR4-2400/ Kingston-CBD24D4U7S1ME-4/ Micron-7QE75D9WEH/ 4GB*2 | CPU: DIMM Slot: Test Summary: Intel Core i5-7600 CPU @ 3.50GHz (SR334) DIMM-1/2 Dual Channel AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1/2) READ:30991 MB/s WRITE:35136 MB/s COPY:28775 MB/s Passmark PerformanceTest 9.0 Build 1029 CPU Mark:7985.5 Memory Mark:2506.4 3DMark for Windows(V 2.6.6238)3times Cloud Gate:7800 Ice Storm:47109 Sky diver:4584 Fire Strike:1106 | Pass |
| 12 | DDR4-2666/ Innodisk-M4U0-8GSSKCIK/ SEC- K4A4G085WE-BCTD/ 8GB*2 | CPU: DIMM Slot: Test Summary: Intel Core i5-6500TE CPU @ 2.30GHz (SR2LR) DIMM-1/2 Dual Channel AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1/2) READ:31210 MB/s WRITE:33059 MB/s COPY:29328 MB/s Passmark PerformanceTest 9.0 Build 1029 CPU Mark:7314.6 Memory Mark:2478.9 3DMark for Windows(V 2.6.6238)3times Cloud Gate:7420 Ice Storm:49377 Sky diver:4160 Fire Strike:1034 | Pass |

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| <p>13</p> | <p>DDR4-2400/ Kingston- CBD24D4U7D8ME-16/ Micron-7TE77D9VPP/ 16GB*2</p> | <p>CPU: Intel Core i3-6100TE CPU @ 2.70GHz (SR2LS) DIMM Slot: DIMM-1/2 Dual Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1/2) READ:16399 MB/s WRITE:16217 MB/s COPY:16433 MB/s</p> <p>Passmark PerformanceTest 9.0 Build 1029 CPU Mark:4462.7 Memory Mark:1955.6</p> <p>3DMark for Windows(V 2.6.6238)3times Cloud Gate:5518 Ice Storm:34722 Sky diver:3481 Fire Strike:824</p> | <p>Pass</p> |
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