

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	AMD / 3.35GHz	AMD Ryzen Embedded V1807B with Radeon Vega Gfx @ 3.35GHz (YE1807C3T4MFB) / 45W	39.5°C	69.0 °C	Pass
2	AMD / 2.30GHz	AMD Ryzen Embedded V1202B with Radeon Vega Gfx @ 2.30GHz (YE1202C4T20FB) / 15W	35.0°C	57.0 °C	Pass
3	AMD / 2.00GHz	AMD Ryzen Embedded V1605B with Radeon Vega Gfx @ 2.00GHz (YE1605C4T4MFB) / 25W	37.0°C	60.0 °C	Pass
4	AMD / 3.25GHz	AMD Ryzen Embedded V1756B with Radeon Vega Gfx @ 3.25GHz (YE1756C3T4MFB) / 45W	38.5°C	67.5 °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 drivers 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. Run Memtest86 Stress test 12 hours. 7. S3(Sleep)/S4(Hibernate)/S5(Shutdown) 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
5	DIMM Slot1	Pass
6	DIMM Slot2	Pass

1.2.2 Application Test:

No.	Software	Test Keypoint	Test Environment	Result
1	MemTest86 Ver.7.5 Pro	1. Stress test 24 hours.	DDR4: DDR4-2400(16GB) Kingston CBD24D4S7D8ME-16 / 7UE75-D9VPP (1070108F-3/4) (DIMM-1/2) Dual Channel O.S.: UEFI Shell	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)	7UE75-D9VPP	CBD24D4S7D8ME-16	Pass
2	Apacer	Samsung	8GB	PC4-19200 (DDR4-2400)	K4A8G085WB BCRC	CL17	Pass
3	Apacer	Samsung	16GB	PC4-19200 (DDR4-2400)	K4A8G085WB BCRC	CL17	Pass
4	Kingston	Micron	4GB	PC4-19200 (DDR4-2400)	7VE75-D9WFH	CBD24D4S7S1ME-4	Pass
5	Transcend	Samsung	4GB	DDR4-2133 (4GB)	K4A4G085WD	TS512MSH64V1H	Pass
6	Kingston	Micron	8GB	PC4-19200 (DDR4-2400)	7TE77-D9VPP	CBD24D4S7S8ME-8	Pass
7	Transcend	Samsung	4GB	PC4-19200 (DDR4-2400)	K4A4G085WE BCRC	TS512MSH64V4H	Pass
8	Transcend	Samsung	8GB	PC4-19200 (DDR4-2133)	K4A4G085WE BCRC	TS1GSH72V1H (ECC)	Pass
9	Transcend	Samsung	4GB	PC4-19200 (DDR4-2400)	K4A4G085WE BCRC	TS512MSH72V4H (ECC)	Pass

1.2.4 DDR4 Test Procedures:

No.	DDR4 Module	Test Environment	Result
1	DDR4-2400(16GB) Kingston CBD24D4S7D8ME-16 / 7UE75-D9VPP	M/B: GH171-CB-V1807B Rev.2 (022) [774-GH1711-000G/BSI440410013] CPU: AMD Ryzen Embedded V1807B 3.35GHz (YE1807C3T4MF) DIMM Slot: (DIMM-1/2) Dual Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1/2) READ:34901 MB/s WRITE:35880 MB/s COPY:32719 MB/s Passmark PerformanceTest 9.0 Build 1029 CPU Mark:9139.7 Memory Mark:1664.8 3DMark for Windows(V 2.6.6238)3times Cloud Gate:8964 Ice Storm Extreme:74979 Skydiver: 10981 Fire Strike:2960	Pass
2	DDR4-2400(8GB) CL17/Apacer SEC 819 K4A8G085WB BCRC	M/B: GH171-CB-V1202B Rev.2 (022) [774-GH1711-200G/BSI440610003] CPU: AMD Ryzen Embedded V1202B 2.30GHz (YE1202C4T20FB) DIMM Slot: (DIMM-1/2) Dual Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1/2) READ:34968 MB/s WRITE:35982 MB/s COPY:32018 MB/s Passmark PerformanceTest 9.0 Build 1029 CPU Mark:5032.3 Memory Mark:1558.1 3DMark for Windows(V 2.6.6238)3times Cloud Gate:5377 Ice Storm Extreme:50320 Skydiver: 4184 Fire Strike:1193	Pass
3	DDR4-2400(16GB) CL17/Apacer SEC 819 K4A8G085WB BCRC	M/B: GH171-CB-V1202B Rev.2 (022) [774-GH1711-200G/BSI440610003] CPU: AMD Ryzen Embedded V1202B 2.30GHz (YE1202C4T20FB) DIMM Slot: (DIMM-1) Single Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) SINGLE CHANNEL(DIMM-1) READ:18284 MB/s WRITE:18749 MB/s COPY:17309 MB/s Passmark PerformanceTest 9.0 Build 1029 CPU Mark:4860.5 Memory Mark:1524.2 3DMark for Windows(V 2.6.6238)3times Cloud Gate:6246 Ice Storm Extreme:45936 Skydiver: 3665 Fire Strike:994	Pass
4	DDR4-2400-8192(1pc- 4GB)/Kingston-CBD24D4S7S1ME- 4/7VE75-D9WFH	M/B: GH171-CB-V1202B Rev.2 (022) [774-GH1711-200G/BSI440610003] CPU: AMD Ryzen Embedded V1202B 2.30GHz (YE1202C4T20FB) DIMM Slot: (DIMM-2) Single Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) SINGLE CHANNEL(DIMM-2) READ:18008 MB/s WRITE:17711 MB/s COPY:16265 MB/s Passmark PerformanceTest 9.0 Build 1029 CPU Mark:4565.9 Memory Mark:1186.5 3DMark for Windows(V 2.6.6238)3times Cloud Gate:5933 Ice Storm Extreme:44185 Skydiver: 3512 Fire Strike:942	Pass

5	DDR4-2133(4GB) Transcend TS512MSH64V1H / SEC 446 BCPB K4A4G085WD	<p>M/B: GH171-CB-V1605B Rev.2 (022) [774-GH1711-300G/BSI440710003]</p> <p>CPU: AMD Ryzen Embedded V1605B 2.00GHz (YE1605C4T4MFB)</p> <p>DIMM Slot: (DIMM-1/2) Dual Channel</p> <p>Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1/2) READ:32003 MB/s WRITE:32420 MB/s COPY:29961 MB/s Passmark PerformanceTest 9.0 Build 1029 CPU Mark:7783.4 Memory Mark:1501.8 3DMark for Windows(V 2.6.6238)3times Cloud Gate:8702 Ice Storm Extreme:55325 Skydiver: 6368 Fire Strike:1804</p>	Pass
6	DDR4-2400(8GB) Kingston CBD24D4S7S8ME-8 / 7TE77-D9VPP	<p>M/B: GH171-CB-V1605B Rev.2 (022) [774-GH1711-300G/BSI440710003]</p> <p>CPU: AMD Ryzen Embedded V1605B 2.00GHz (YE1605C4T4MFB)</p> <p>DIMM Slot: (DIMM-1) Single Channel</p> <p>Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) SINGLE CHANNEL(DIMM-1) READ:18120 MB/s WRITE:17918 MB/s COPY:17054 MB/s Passmark PerformanceTest 9.0 Build 1029 CPU Mark:7234.1 Memory Mark:1466.6 3DMark for Windows(V 2.6.6238)3times Cloud Gate:6635 Ice Storm Extreme:52671 Skydiver: 5635 Fire Strike:1487</p>	Pass
7	DDR4-2400(4GB)/Transcend TS512MSH64V4H / SEC 740 K4A4G085WE BCRC	<p>M/B: GH171-CB-V1756B Rev.2 (022) [774-GH1711-100G/BSI440510007]</p> <p>CPU: AMD Ryzen Embedded V1756B 3.25GHz (YE1756C3T4MFB)</p> <p>DIMM Slot: (DIMM-1/2) Dual Channel</p> <p>Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1/2) READ:35435 MB/s WRITE:36422 MB/s COPY:33045 MB/s Passmark PerformanceTest 9.0 Build 1029 CPU Mark:8871.6 Memory Mark:1530.6 3DMark for Windows(V 2.6.6238)3times Cloud Gate:12371 Ice Storm Extreme:69151 Skydiver: 9026 Fire Strike:2511</p>	Pass
8	DDR4-2133(8GB) Transcend TS1GSH72V1H / Samsung SEC 704 K4A4G085WE BCRC (ECC)	<p>M/B: GH171-CB-V1807B Rev.2 (022) [774-GH1711-000G/BSI440410013]</p> <p>CPU: AMD Ryzen Embedded V1807B 3.35GHz (YE1807C3T4MF)</p> <p>DIMM Slot: (DIMM-1) Single Channel</p> <p>Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) SINGLE CHANNEL(DIMM-1) READ:16288 MB/s WRITE:16744 MB/s COPY:15854 MB/s Passmark PerformanceTest 9.0 Build 1029 CPU Mark:8251.4 Memory Mark:1454.8 3DMark for Windows(V 2.6.6238)3times Cloud Gate:9003 Ice Storm Extreme:56077 Skydiver: 6730 Fire Strike:1586</p>	Pass



9	DDR4-2400(4GB) Transcend TS512MSH72V4H / Samsung SEC 749 K4A4G085WE BCRC (ECC)	M/B: GH171-CB-V1807B Rev.2 (022) [774-GH1711-000G/BSI440410013] CPU: AMD Ryzen Embedded V1807B 3.35GHz (YE1807C3T4MF) DIMM Slot: (DIMM-1/2) Dual Channel Test Summary: AIDA64 Cache and Memory Benchmark(V5.97.4600) DUAL CHANNEL(DIMM-1) READ:35788 MB/s WRITE:36497 MB/s COPY:32649 MB/s Passmark PerformanceTest 9.0 Build 1029 CPU Mark:9180.2 Memory Mark:1579.8 3DMark for Windows(V 2.6.6238)3times Cloud Gate:13937 Ice Storm Extreme:69809 Skydiver: 10696 Fire Strike:2891	Pass
----------	--	--	-------------

