

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 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 / 3.7GHz	Core i9-10900K (Cometlake-S/QUTF) / 125W / LGA1200	34.0°C	65.0°C	Pass
2	Intel / 2.8GHz	Core i9-10900E (Cometlake-S/QUK7) / 65W / LGA1200	34.0°C	56.0°C	Pass
3	Intel / 1.8GHz	Core i9-10900TE (Cometlake-S/QUK6) / 35W / LGA1200	35.0°C	57.0°C	Pass
4	Intel / 3.8GHz	Core i7-10700K (Cometlake-S/QUKR) / 125W / LGA1200	34.0°C	56.0°C	Pass
5	Intel / 2.9GHz	Core i7-10700E (Cometlake-S/QV20) / 65W / LGA1200	36.0°C	58.0°C	Pass
6	Intel / 2.0GHz	Core i7-10700TE (Cometlake-S/QUKC) / 35W / LGA1200	35.0°C	56.0°C	Pass
7	Intel / 3.1GHz	Core i5-10500E (Cometlake-S/QV22) / 65W / LGA1200	36.0°C	58.0°C	Pass
8	Intel / 2.3GHz	Core i5-10500TE (Cometlake-S/QTk3) / 35W / LGA1200	36.5°C	59.0°C	Pass
9	Intel / 3.2GHz	Core i3-10100E (Cometlake-S/QTk4) / 65W / LGA1200	34.0°C	56.0°C	Pass
10	Intel / 2.3GHz	Core i3-10100TE (Cometlake-S/QTk5) / 35W / LGA1200	36.5°C	58.0°C	Pass
11	Intel / 3.8GHz	Core Pentium G6400E (Cometlake-S/QUVA) / 58W / LGA1200	35.5°C	58.0°C	Pass
12	Intel / 3.2GHz	Core Celeron G5900E (Cometlake-S/QUVB) / 58W / LGA1200	35.0°C	58.0°C	Pass
13	Intel / 3.0GHz	Core Celeron G5900TE (Cometlake-S/QTk8) / 35W / LGA1200	35.0°C	57.0°C	Pass
14	Intel / 3.5GHz	Xeon W-1290E (Cometlake-S/QUK8) / 95W / LGA1200	36.0°C	58.0°C	Pass
15	Intel / 1.8GHz	Xeon W-1290TE (Cometlake-S/QUKD) / 35W / LGA1200	35.0°C	57.0°C	Pass
16	Intel / 3.4GHz	Xeon W-1270E (Cometlake-S/QUK9) / 80W / LGA1200	35.0°C	56.0°C	Pass
17	Intel / 2.0GHz	Xeon W-1270TE (Cometlake-S/QUKA) / 35W / LGA1200	36.0°C	58.0°C	Pass
18	Intel / 3.5GHz	Xeon W-1250E (Cometlake-S/QTkA) / 80W / LGA1200	34.0°C	55.0°C	Pass
19	Intel / 2.4GHz	Xeon W-1250TE (Cometlake-S/QTkB) / 35W / LGA1200	35.0°C	57.0°C	Pass

1.1.1 Application Test:

No.	Software	Test Keypoint	Result
1	CPU-Z ver.1.93.0	1. Check all information.	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.6.32.5600 1 time 4. Run Passmark Performance Test 10.0 Build1010 1 time 5. Run 3DMark for Windows Ver.2.15.7088 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	Dual Channel mode	Pass
2	Single Channel mode	Pass

1.2.2 Application Test:

No.	Software	Test Keypoint	Test Environment	Result
1	PassMark MemTest86 V8.4 Pro	1. Burn-In test 12 hours.	DDR4: DDR4-3200/ATP-X4D32QB8BVWEME-7-DR1/Micron-0CB45 D9XPF/32GB*4 (DIMM-1/2/3/4) DUAL CHANNEL DDR4: DDR4-3200(ECC)/ADATA-AD4E3200732G22-BSSA/SEC-K4AAG085WA-BCRWE/32GB*4 (DIMM-1/2/3/4) DUAL CHANNEL O.S.: UEFI Shell Memtest86 V8.4	Pass

1.2.3 DDR4 Approved List:

No.	Brand	Chip	Size	Type	Chip Model No.	Vendor Part No.	Result
1	ATP	DDR4-3200	32GB	Micron	9KB45 D9XPF	X4D32QB8BVWEME-7-DR1	Pass
2	ADATA	DDR4-2666	32GB	SEC	K4AAG085WA-BCTD	AD4U2666732G19-BSSA	Pass
3	Transcend	DDR4-2666	8GB	SEC	K4A8G085WC BCTD	TS1GLH64V6B	Pass
4	Transcend	DDR4-2666	16GB	SEC	K4A8G085WC-BCTD	TS2GLH64V6B	Pass
5	Apacer	DDR4-2666	8GB	SEC	K4A8G085WB-BCTD	78.C1GS7.40F0B	Pass
6	Apacer	DDR4-2666	16GB	SEC	K4A8G085WB-BCTD	78.D1GS7.4010B	Pass
7	Apacer	DDR4-2666	4GB	SEC	K4A4G085WE-BCTD	78.B1GS6.40F0B	Pass
8	Transcend	DDR4-2666	8GB	SEC	K4A8G085WC BCTD	TS1GLH64V6B	Pass
9	Innodisk	DDR4-2666	4GB	SEC	K4A4G085WE-BTCD	M4U0-4GSSJCIK	Pass
10	Transcend	DDR4-2666	8GB	SEC	K4A8G085WC BCTD	TS1GLH64V6B	Pass
11	Transcend	DDR4-2400	8GB	SEC	K4A4G085WE-BCRC	TS1GLH64V4H	Pass
12	Transcend	DDR4-2400	16GB	SEC	K4A8G085WB-BCRC	TS2GLH64V4B	Pass
13	ADATA	DDR4-3200 (ECC)	32	SEC	K4AAG085WA-BCRWE	AD4E3200732G22-BSSA	Pass
14	Transcend	DDR4-2666 (ECC)	32GB	SEC	K4AAG085WM-BCTD	TS4GLH72V6E	Pass
15	ADATA	DDR4-2666 (ECC)	16GB	SEC	K4A8G085WC BCTD	AD4E2666316G19-BSSC	Pass
16	Transcend	DDR4-2666 (ECC)	32GB	SEC	K4AAG085WM-BCTD	TS4GLH72V6E-001	Pass
17	ADATA	DDR4-2400 (ECC)	16GB	SK Hynix	H5AN8G8NAFR-UHC	AD4E240031617-BHYA	Pass
18	Transcend	DDR4-2666 (ECC)	8GB	SEC	K4A8G085WC BCTD	TS1GLH72V6B	Pass
19	Innodisk	DDR4-2666 (ECC)	4GB	SEC	K4A4G085WE BCTD	M4C0-4GSSLCIK	Pass

1.2.4 DDR4 Module Test Procedures:

No.	DDR4 Module	Test Procedures	Result
1	DDR4-3200/ATP-X4D32QB8BVWEME-7-DR1/Micron-0CB45 D9XPF/32GB*4	M/B: CMS630-Q470ECRM Rev.2 (021) (BSK531500010) CPU: Intel Core i9-10900K 3.70GHz (QUTK) DIMM Slot: DIMM-1/2/3/4 Dual Channel Test Summary: AIDA64 Cache and Memory Benchmark(V6.32.5600) DUAL CHANNEL(DIMM-1/2/3/4) READ:39977 MB/s WRITE:42827 MB/s COPY:40670 MB/s Passmark PerformanceTest 10.0 Build 1010 CPU Mark:19362.2 Memory Mark:3233 3DMark for Windows(V 2.15.7088)3times Cloud Gate:13044 Ice Storm:56524 Sky diver:5704 Fire Strike:1409	Pass
2	DDR4-2666/ ADATA- AD4U2666732G19-BSSA/ SEC- K4AAG085WA-BCTD/32GB*	M/B: CMS630-Q470ECRM Rev.2 (021) (BSK531500010) CPU: Intel Core i9-10900E 2.80GHz (QUK7) DIMM Slot: DIMM-1 Single Channel Test Summary: AIDA64 Cache and Memory Benchmark(V6.32.5600) SINGLE CHANNEL(DIMM-1) READ:22074 MB/s WRITE:19004 MB/s COPY:21661 MB/s Passmark PerformanceTest 10.0 Build 1010 CPU Mark:13551.7 Memory Mark:2345.5 3DMark for Windows(V 2.15.7088)3times Cloud Gate:10255 Ice Storm:48142 Sky diver:4943 Fire Strike:1191	Pass
3	DDR4-2666/ Transcend- TS1GLH64V6B/SEC- K4A8G085WC BCTD/8GB*	M/B: CMS630-Q470ECRM Rev.2 (021) (BSK531500010) CPU: Intel Core i9-10900TE CPU @ 1.80GHz (QUK6) DIMM Slot: DIMM-2 Single Channel Test Summary: AIDA64 Cache and Memory Benchmark(V6.32.5600) SINGLE CHANNEL(DIMM-2) READ:21541 MB/s WRITE:19045 MB/s COPY:19238 MB/s Passmark PerformanceTest 10.0 Build 1010 CPU Mark:9172.3 Memory Mark:1716.1 3DMark for Windows(V 2.15.7088)3times Cloud Gate:8371 Ice Storm:43131 Sky diver:4205 Fire Strike:1013	Pass
4	DDR4-2666/ Transcend- TS2GLH64V6B/SEC- K4A8G085WC BCTD/16GB*	M/B: CMS630-Q470ECRM Rev.2 (021) (BSK531500010) CPU: Intel Core i7-10700K 3.80GHz (QUKR) DIMM Slot: DIMM-3 Single Channel Test Summary: AIDA64 Cache and Memory Benchmark(V6.32.5600) SINGLE CHANNEL(DIMM-3) READ:22021 MB/s WRITE:19751 MB/s COPY:21149 MB/s Passmark PerformanceTest 10.0 Build 1010 CPU Mark:14965.9 Memory Mark:2684.4 3DMark for Windows(V 2.15.7088)3times Cloud Gate:12123 Ice Storm:53660 Sky diver:5328 Fire Strike:1271	Pass

5	DDR4-2666/ Apacer-78.C1GS7.40F0B/SEC-K4A8G085WB-BCTD/8GB*	M/B: CPU: DIMM Slot: Test Summary:	CMS630-Q470ECRM Rev.2 (021) (BSK531500010) Intel Core i7-10700TE 2.00GHz (QUKC) DIMM-4 Single Channel AIDA64 Cache and Memory Benchmark(V6.32.5600) SINGLE CHANNEL(DIMM-4) READ:20801 MB/s WRITE:19394 MB/sCOPY:20790 MB/s Passmark PerformanceTest 10.0 Build 1010 CPU Mark:8467.1 Memory Mark:1811.4 3DMark for Windows(V 2.15.7088)3times Cloud Gate:10075 Ice Storm:45326 Sky diver:4919 Fire Strike:1169	Pass
6	DDR4-2666/ Apacer-78.D1GS7.4010B/SEC-K4A8G085WB-BCTD/16GB*	M/B: CPU: DIMM Slot: Test Summary:	CMS630-Q470ECRM Rev.2 (021) (BSK531500010) Intel Core i5-10500E 3.10GHz (QV22) DIMM-1/3 Dual Channel AIDA64 Cache and Memory Benchmark(V6.32.5600) DUAL CHANNEL(DIMM-1/3) READ:38731 MB/s WRITE:40540 MB/sCOPY:36535 MB/s Passmark PerformanceTest 10.0 Build 1010 CPU Mark:10626.7 Memory Mark:2845.9 3DMark for Windows(V 2.15.7088)3times Cloud Gate:11325 Ice Storm:53228 Sky diver:5443 Fire Strike:1358	Pass
7	DDR4-2666/Apacer-78.B1GS6.40F0B/SEC- K4A4G085WE-BCTD/4GB*	M/B: CPU: DIMM Slot: Test Summary:	CMS630-Q470ECRM Rev.:2 (021) (BSK531500010) Intel Core i5-10500TE 2.30GHz (QTK3) DIMM-2/4 Dual Channel AIDA64 Cache and Memory Benchmark(V6.32.5600) DUAL CHANNEL(DIMM-2/4) READ:38450 MB/s WRITE:39676 MB/sCOPY:3185 MB/s Passmark PerformanceTest 10.0 Build 1010 CPU Mark:7867.3 Memory Mark:2208.6 3DMark for Windows(V 2.15.7088)3times Cloud Gate:10242 Ice Storm:49113 Sky diver:5281 Fire Strike:1322	Pass
8	DDR4-2666/ Innodisk- M4U0-4GSSJCIK/SEC- K4A4G085WE-BTCD/4GB*	M/B: CPU: DIMM Slot: Test Summary:	CMS630-Q470ECRM Rev.2 (021) (BSK531500010) Intel Core i3-10100TE 2.30GHz (QTK5) DIMM-1/2 Single Channel AIDA64 Cache and Memory Benchmark(V6.32.5600) SINGLE CHANNEL(DIMM-1/2) READ:19891 MB/s WRITE:20210 MB/sCOPY:19422 MB/s Passmark PerformanceTest 10.0 Build 1010 CPU Mark:5321.4 Memory Mark:2004.9 3DMark for Windows(V 2.15.7088)3times Cloud Gate:9211 Ice Storm:43235 Sky diver:4615 Fire Strike:1084	Pass
9	DDR4-2666/ Innodisk- M4U0-4GSSJCIK/SEC- K4A4G085WE-BTCD/4GB*2	M/B: CPU: DIMM Slot: Test Summary:	CMS630-Q470ECRM Rev.2 (021) (BSK531500010) Intel Core i3-10100E 3.20GHz (QTK4) DIMM-3/4 Single Channel AIDA64 Cache and Memory Benchmark(V6.32.5600) SINGLE CHANNEL(DIMM-3/4) READ:19595 MB/s WRITE:19812 MB/sCOPY:19391 MB/s Passmark PerformanceTest 10.0 Build 1010 CPU Mark:7108.6 Memory Mark:2499 3DMark for Windows(V 2.15.7088)3times Cloud Gate:9108 Ice Storm:43983 Sky diver:4633 Fire Strike:1086	Pass

10	DDR4-2666/Transcend- TS1GLH64V6B/ SEC- K4A8G085WC-BCTD/8GB*	M/B: CPU: DIMM Slot: Test Summary:	CMS630-Q470ECRM Rev.2 (021) (BSK531500010) Intel Pentium Gold G6400E 3.80GHz (QUVA)DIMM-1 Single Channel AIDA64 Cache and Memory Benchmark(V6.32.5600) SINGLE CHANNEL(DIMM-1) READ:17806 MB/s WRITE:17703 MB/sCOPY:16910 MB/s Passmark PerformanceTest 10.0 Build 1010 CPU Mark:3937.1 Memory Mark:2250.9 3DMark for Windows(V 2.15.7088)3times Cloud Gate:5780 Ice Storm:27125 Sky diver:2797 Fire Strike:674	Pass
11	DDR4-2400/Transcend-TS1GLH64V4H/ SEC-K4A4G085WE-BCRC/8GB*	M/B: CPU: DIMM Slot: Test Summary:	CMS630-Q470ECRM Rev.2 (021) (BSK531500010) Intel Celeron G5900E 3.20GHz (QUVB)DIMM-2 Single Channel AIDA64 Cache and Memory Benchmark(V6.32.5600) SINGLE CHANNEL(DIMM-2) READ:18337 MB/s WRITE:18246 MB/sCOPY:17912 MB/s Passmark PerformanceTest 10.0 Build 1010 CPU Mark:2626.1 Memory Mark:2156.1 3DMark for Windows(V 2.15.7088)3times Cloud Gate:4662 Ice Storm:25152 Sky diver:2627 Fire Strike:655	Pass
12	DDR4-2400/ Transcend- TS2GLH64V4B/SEC- K4A8G085WB- BCRC/16GB*	M/B: CPU: DIMM Slot: Test Summary:	CMS630-Q470ECRM Rev.2 (021) (BSK531500010) Intel Celeron G5900TE 3.00GHz (QTK8)DIMM-3 Single Channel AIDA64 Cache and Memory Benchmark(V6.32.5600) SINGLE CHANNEL(DIMM-3) READ:18174 MB/s WRITE:18023 MB/sCOPY:17807 MB/s Passmark PerformanceTest 10.0 Build 1010 CPU Mark:2454.8 Memory Mark:2198.3 3DMark for Windows(V 2.15.7088)3times Cloud Gate:4552 Ice Storm:24798 Sky diver:2606 Fire Strike:651	Pass
13	DDR4-3200(ECC)/ADATA- AD4E3200732G22- BSSA/SEC- K4AAG085WA- BCRWE/32GB*4	M/B: CPU: DIMM Slot: Test Summary:	CMS630-W480ECRM Rev.2 (021) (BSK531400008) Intel Xeon W-1290E 3.50GHz (QUK8) DIMM-1/2/3/4 Dual Channel AIDA64 Cache and Memory Benchmark(V6.32.5600) DUAL CHANNEL(DIMM-1/2/3/4) READ:39589 MB/s WRITE:43602 MB/sCOPY:4149 MB/s Passmark PerformanceTest 10.0 Build 1010 CPU Mark:18345.8 Memory Mark:3095 3DMark for Windows(V 2.15.7088)3times Cloud Gate:12602 Ice Storm:53292 Sky diver:5650 Fire Strike:1376	Pass
14	DDR4-2666(ECC)/ Transcend- TS4GLH72V6E/ SEC- K4AAG085WM-BCTD/32GB*	M/B: CPU: DIMM Slot: Test Summary:	CMS630-W480ECRM Rev.2 (021) (BSK531400008) Intel Xeon W-1250E 3.50GHz (QTKA) DIMM-3 Single Channel AIDA64 Cache and Memory Benchmark(V6.32.5600) SINGLE CHANNEL(DIMM-3) READ:21485 MB/s WRITE:19186 MB/sCOPY:19641 MB/s Passmark PerformanceTest 10.0 Build 1010 CPU Mark:8651.1 Memory Mark:2513.3 3DMark for Windows(V 2.15.7088)3times Cloud Gate:8739 Ice Storm:40014 Sky diver:4282 Fire Strike:1037	Pass

15	DDR4-2666(ECC)/ Transcend-TS1GLH72V6B/ SEC-K4A8G085WCBCTD/8GB*	M/B: CPU: DIMM Slot: Test Summary:	CMS630-W480ECRM Rev.2 (021) (BSK531400008) Intel Xeon W-1290TE 1.80GHz (QUKD) DIMM-1 Single Channel AIDA64 Cache and Memory Benchmark(V6.32.5600) SINGLE CHANNEL(DIMM-1) READ:21588 MB/s WRITE:18955 MB/SCOPY:19344 MB/s Passmark PerformanceTest 10.0 Build 1010 CPU Mark:9129.8 Memory Mark:1682.1 3DMark for Windows(V 2.15.7088)3times Cloud Gate:9669 Ice Storm:42864 Sky diver:5005 Fire Strike:1194	Pass
16	DDR4-2666(ECC)/ Innodisk-M4C0-4GSSLCIK/SEC-K4A4G085WE BCTD/4GB*	M/B: CPU: DIMM Slot: Test Summary:	CMS630-W480ECRM Rev.2 (021) (BSK531400008) Intel Xeon W-1270E 3.40GHz (QUK9) DIMM-2 Single Channel AIDA64 Cache and Memory Benchmark(V6.32.5600) SINGLE CHANNEL(DIMM-2) READ:20950 MB/s WRITE:32108 MB/SCOPY:19342 MB/s Passmark PerformanceTest 10.0 Build 1010 CPU Mark:13003.3 Memory Mark:1906.4 3DMark for Windows(V 2.15.7088)3times Cloud Gate:10882 Ice Storm:46607 Sky diver:4961 Fire Strike:1174	Pass
17	DDR4-2666(ECC)/ ADATA-AD4E2666316G19-BSSC/ SEC-K4A8G085WC BCTD/16GB*	M/B: CPU: DIMM Slot: Test Summary:	CMS630-W480ECRM Rev.2 (021) (BSK531400008) Intel Xeon W-1270TE 2.00GHz (QUKA) DIMM-3 Single Channel AIDA64 Cache and Memory Benchmark(V6.32.5600) SINGLE CHANNEL(DIMM-3) READ:21819 MB/s WRITE:19620 MB/SCOPY:22464 MB/s Passmark PerformanceTest 10.0 Build 1010 CPU Mark:8633.1 Memory Mark:1907.4 3DMark for Windows(V 2.15.7088)3times Cloud Gate:10242 Ice Storm:44636 Sky diver:4966 Fire Strike:1219	Pass
18	DDR4-2666(ECC)/Transcend-TS4GLH72V6E-001/SEC-K4AAG085WM- BCTD/32GB*	M/B: CPU: DIMM Slot: Test Summary:	CMS630-W480ECRM Rev.2 (021) (BSK531400008) Intel Xeon W-1250TE 2.40GHz (QTKB) DIMM-4 Single Channel AIDA64 Cache and Memory Benchmark(V6.32.5600) SINGLE CHANNEL(DIMM-4) READ:20901 MB/s WRITE:18690 MB/SCOPY:20964 MB/s Passmark PerformanceTest 10.0 Build 1010 CPU Mark:7871.9 Memory Mark:2181.4 3DMark for Windows(V 2.15.7088)3times Cloud Gate:9327 Ice Storm:44258 Sky diver:4827 Fire Strike:1156	Pass
19	DDR4-2400(ECC) / ADATA-AD4E240031617-BHYA / SK Hynix-H5AN8G8NAFR-UHC /16GB*2	M/B: CPU: DIMM Slot: Test Summary:	CMS630-W480ECRM Rev.2 (021) (BSK531400008) Intel Xeon W-1290E 3.50GHz (QUK8) DIMM-1/3 Dual Channel AIDA64 Cache and Memory Benchmark(V6.32.5600) DUAL CHANNEL(DIMM-1/3) READ:35826 MB/s WRITE:36247 MB/SCOPY:36230 MB/s Passmark PerformanceTest 10.0 Build 1010 CPU Mark:19526.7 Memory Mark:3484 3DMark for Windows(V 2.15.7088)3times Cloud Gate:12444 Ice Storm:51960 Sky diver:5574 Fire Strike:1392	Pass