

1. Stability Test: Rev.011

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 Driver 3. CPU-Z check CPU info 4. Run AIDA64 Cache and Memory Benchmark Ver.5.60.3700 1 time 5. Run Passmark Performance Test 8.0 Build1053 1 time 6. Run 3DMark for Windows Ver.1.5.915 BenchMark 3 times 7. S3/Hibernate Test 3 times
Test Criteria	It should be no problem for all tests

Test Environment	
M/B:	SD101-Q170NRM Rev.A (0A1)
M/B BIOS:	Insyde 06/20/2016
M/B Driver:	Demo ver.0.2.1606.1
CPU:	Intel / Core i7-6700TE (Skylake-S/SR2LP) / 2.4GHz
DDR4:	Transcend (TS1GSH64V1H 1.2V) [512Mx8b,CL=15,tRCD=15,tRP=15] / SEC (K4A4G085WD-BCPB) / PC4-17000 (DDR4-2133) / 8GB *2
SSD:	Intel / SSDSC2BW120A401 SATA3 120GB/2.5" (port SATA3_0)
Display:	On Board
DVD-ROM:	Pioneer / DVD-232DW 18X (port SATA3_3)
USB Pen Drive:	PQI / U273V 16GB/USB3.0
Power:	EDAC / EA11011D-120
O.S.:	Windows 8.1 Embedded Pro 64Bit (with update 1) (English)

No.	CPU	Type	CPU Temp.	Result
1	Intel / 2.40GHz	Core i7-6700TE (Skylake-S/R0-SR2LP) / 35W / LGA1151	20.5 °C	Pass (was:ID3372)
2	Intel / 3.40GHz	Core i7-6700 (Skylake-S/R0-SR2BT) / 65W / LGA1151	44.5 °C	Pass
3	Intel / 2.30GHz	Core i5-6500TE (Skylake-S/R0-SR2LR) / 35W / LGA1151	24.5 °C	Pass (was:ID3372)
4	Intel / 3.70GHz	Core i3-6100 (Skylake-S/S0-SR2HG) / 51W / LGA1151	40 °C	Pass
5	Intel / 3.30GHz	Pentium-G4400 (Skylake-S/R0-SR2DC) / 54W / LGA1151	33 °C	Pass
6	Intel / 2.40GHz	Pentium-G4400TE (Skylake-S/R0-SR2LT) / 35W / LGA1151	32 °C	Pass
7	Intel / 2.30GHz	Celeron G3900TE (Skylake-S/R0-SR2LU) / 35W / LGA1151	22.5 °C	Pass (was:ID3372)



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.5.60.3700 1 time 4. Run Passmark Performance Test 8.0 Build1053 1 time 5. Run 3DMark for Windows Ver.1.5.915 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	Single Channel mode	Pass
2	Dual channel mode	Pass
3	DIMM Slot1	Pass
4	DIMM Slot2	Pass

1.2.2 Application Test:

No.	Software	Test Keypoint	Test Environment	Result
1	MemTest86 Ver.6.0.0	1. Burn-In test 12 hours.	M/B: SD103-Q170NRM Rev.2 (021) (BSF511700016) M/B BIOS: Insyde 01/20/2016 M/B Driver: Demo ver.0.2.1512.0 CPU: Intel / Core i7-6700TE (Skylake-S/R0-SR2LP) / 2.4GHz DDR4: Innodisk (M4SR-AGS10COG-B 1.2V) [1Gx8b-x16/2048Mx64b 1066MHz@CL=15,tRCD=15,tRP=15] / SEC (K4A8G085WB-BCPB) / PC4-17000 (DDR4-2133) / 16GB *2 SSD: Intel / SSDSC2BW120A4 SATA3 120GB/2.5" Display: On Board (using HDMI) DVD-ROM: Asus / DVD-E818A9T 18X SATA Power: EDAC / EA11011M-190 Jagier / KY-580ATX 480W O.S.: DOS	Pass

1.2.3 DDR4 SO-DIMM Approved List:

No.	Brand	Chip	Size	Type	Chip Model No.	Vendor Part No.	Result
1	Innodisk	SEC	16GB	PC4-17000 (DDR4-2133)	K4A8G085WB-BCPB	M4SR-AGS1OC0G-B 1.2V [1Gx8b-x16/2048Mx64b 1066MHz@CL=15,tRCD=15,tRP=15]	Pass
2	Transcend	SEC	16GB	PC4-17000 (DDR4-2133)	K4A8G085WB-BCPB	TS2GSH64V1B 1.2V [512Mx8b,CL=15,tRCD=15,tRP=15]	Pass
3	Transcend	SEC	8GB	PC4-17000 (DDR4-2133)	K4A4G085WD-BCPB	TS1GSH64V1H 1.2V [512Mx8b,CL=15,tRCD=15,tRP=15]	Pass
4	Kingston	SKhynix	8GB	PC4-17000 (DDR4-2133)	H5AN4G8NAFR-TFC	CBD21D4S15HAG 1.2V [512Mx8-bit/Data Rate:2133Mbps z@CL=15,tRCD=15,tRP=15]	Pass
5	ATLA	SEC	8GB	PC4-17000 (DDR4-2133)	K4A4G085WE-BCPB	AD4SST8GT1WB-EOGE 1.2V	Pass
6	ADATA	ADATA	4GB	PC4-17000 (DDR4-2133)	4WQA-0915A-M1511V	AD4S2133W4G15-BHYM 1.2V [512Mx8b-x8/512Mx64b 1066MHz@CL=15,tRCD=15,tRP=15]	Pass
7	Innodisk	SEC	4GB	PC4-17000 (DDR4-2133)	K4A4G085WD-BCPB	M4SR-4GSSNC0G-D 1.2V [512Mx8b-x8/512Mx64b 1066MHz@CL=15,tRCD=15,tRP=15]	Pass
8	Kingston	SKhynix	4GB	PC4-17000 (DDR4-2133)	H5AN4G8NAFR-TFC	CBD21D4S15HAG 1.2V [512Mx8-bit/Data Rate:2133Mbps z@CL=15,tRCD=15,tRP=15]	Pass

1.2.4 DDR4 SO-DIMM Module Test Procedures:

No.	DDR4 Module	Test Environment	Result
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1	<p>Innodisk (M4SR-AGS10C0G-B 1.2V)</p> <p>[1Gx8b-x16/2048Mx64b</p> <p>1066MHz@CL=15,tRCD=15,tRP=15] /</p> <p>SEC (K4A8G085WB-BCPB) /</p> <p>PC4-17000 (DDR4-2133) /</p> <p>16GB *2</p>	<p>M/B: SD103-Q170NRM Rev.2 (021) (BSF511700016)</p> <p>M/B BIOS: Insyde 01/20/2016</p> <p>M/B Driver: Demo ver.0.2.1512.0</p> <p>CPU: Intel / Core i7-6700TE (Skylake-S/R0-SR2LP) / 2.4GHz</p> <p>DIMM Slot: DIMM-1/2 (Dual channel)</p> <p>SSD: Intel / SSDSC2BW120A4 SATA3 120GB/2.5"</p> <p>Display: On Board (using HDMI)</p> <p>DVD-ROM: Asus / DVD-E818A9T 18X SATA</p> <p>Power: EDAC / EA11011M-190</p> <p>Jagier / KY-580ATX 480W</p> <p>O.S.: Windows 8.1 Embedded Pro 64Bit (with update 1) (English)</p> <p>Test Summary: Environment Temp.:23.0°C</p> <p>CPU Temp.:22.5°C</p> <p>CPU Temp. after 3DMark:21.5°C</p> <p>1.AIDA64 Cache and Memory Benchmark Ver.5.60.3700</p> <p> READ:30360 MB/s</p> <p> WRITE:32263 MB/s</p> <p> COPY:30475 MB/s</p> <p>2.PassMark Performance Test 8.0 Build 1053</p> <p> CPU Mark:8915</p> <p> Memory Mark:2623</p> <p>3.3DMark for Windows Ver.1.5.915</p> <p> Cloud Gate:7206</p> <p> Ice Storm:36651</p> <p> Sky Diver:3709</p> <p> Strike Test:922</p>	Pass
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No.	DDR4 Module	Test Environment	Result
2	Transcend (TS2GSH64V1B 1.2V) [512Mx8b,CL=15,tRCD=15,tRP=15] / SEC (K4A8G085WB-BCPB) / PC4-17000 (DDR4-2133) / 16GB *2	M/B: SD101-H110N Rev.2 (021) (BSF511400010) M/B BIOS: Insyde 01/20/2016 M/B Driver: Demo ver.0.2.1512.0 CPU: Intel / Pentium-G4400 (Skylake-S/R0-SR2DC) / 3.3GHz DIMM Slot: DIMM-1/2 (Dual channel) SSD: Intel / SSDSC2CT080A4 SATA3 80GB/2.5" Display: On Board (using DVI) DVD-ROM: Pioneer / DVD-232DW 18X SATA Power: EDAC / EA11011D-120 Delta / GPS-500BB 500W O.S.: Windows 8.1 Embedded Pro 64Bit (with update 1) (English) Test Summary: Environment Temp.:23.6℃ CPU Temp.:31.0℃ CPU Temp. after 3DMark:33.0℃ 1.AIDA64 Cache and Memory Benchmark Ver.5.60.3700 READ:28267 MB/s WRITE:32436 MB/s COPY:30041 MB/s 2.PassMark Performance Test 8.0 Build 1053 CPU Mark:3890 Memory Mark:2734 3.3DMark for Windows Ver.1.5.915 Cloud Gate:4440 Ice Storm:27251 Sky Diver:2300 Strike Test:572	Pass

3	<p>Transcend (TS1GSH64V1H 1.2V) [512Mx8b,CL=15,tRCD=15,tRP=15] / SEC (K4A4G085WD-BCPB) / PC4-17000 (DDR4-2133) / 8GB *2</p>	<p>M/B: SD101-H110N Rev.2 (021) (BSF511400010) M/B BIOS: Insyde 01/20/2016 M/B Driver: Demo ver.0.2.1512.0 CPU: Intel / Core i5-6500TE (Skylake-S/R0-SR2LR) / 2.3GHz DIMM Slot: DIMM-1/2 (Dual channel) SSD: Intel / SSDSC2CT080A4 SATA3 80GB/2.5" Display: On Board (using DVI) DVD-ROM: Pioneer / DVD-232DW 18X SATA Power: EDAC / EA11011D-120 Delta / GPS-500BB 500W O.S.: Windows 8.1 Embedded Pro 64Bit (with update 1) (English) Test Summary: Environment Temp.:22.7°C CPU Temp.:21.5°C CPU Temp. after 3DMark:21.0°C 1.AIDA64 Cache and Memory Benchmark Ver.5.60.3700 READ:29826 MB/s WRITE:32300 MB/s COPY:30045 MB/s 2.PassMark Performance Test 8.0 Build 1053 CPU Mark:6666 Memory Mark:2508 3.3DMark for Windows Ver.1.5.915 Cloud Gate:7298 Ice Storm:50372 Sky Diver:3886 Strike Test:931</p>	Pass
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No.	DDR4 Module	Test Environment	Result
4	Kingston (CBD21D4S15HAG 1.2V) [512Mx8-bit/Data Rate:2133Mbps z@CL=15,tRCD=15,tRP=15] / SKhynix (H5AN4G8NAFR-TFC) / PC4-17000 (DDR4-2133) / 8GB *1	M/B: SD101-H110N Rev.2 (021) (BSF511400010) M/B BIOS: Insyde 01/20/2016 M/B Driver: Demo ver.0.2.1512.0 CPU: Intel / Core i3-6100 (Skylake-S/S0-SR2HG) / 3.7GHz DIMM Slot: DIMM-1 (Single channel) SSD: Intel / SSDSC2CT080A4 SATA3 80GB/2.5" Display: On Board (using DVI) DVD-ROM: Pioneer / DVD-232DW 18X SATA Power: EDAC / EA11011D-120 Delta / GPS-500BB 500W O.S.: Windows 8.1 Embedded Pro 64Bit (with update 1) (English) Test Summary: Environment Temp.:20.0°C CPU Temp.:40.5°C CPU Temp. after 3DMark:40.0°C 1.AIDA64 Cache and Memory Benchmark Ver.5.60.3700 READ:16127 MB/s WRITE:16031 MB/s COPY:16136 MB/s 2.PassMark Performance Test 8.0 Build 1053 CPU Mark:5352 Memory Mark:2128 3.3DMark for Windows Ver.1.5.915 Cloud Gate:6286 Ice Storm:39848 Sky Diver:3526 Strike Test:766	Pass

5	<p>ATLA (AD4SST8GT1WB-EOGE 1.2V) / SEC (K4A4G085WE-BCPB) / PC4-17000 (DDR4-2133) / 8GB *2</p>	<p>M/B: SD101-H110N Rev.2 (021) (BSF511400010) M/B BIOS: Insyde 01/20/2016 M/B Driver: Demo ver.0.2.1512.0 CPU: Intel / Core i3-6100 (Skylake-S/S0-SR2HG) / 3.7GHz DIMM Slot: DIMM-1/2 (Dual channel) SSD: Intel / SSDSC2CT080A4 SATA3 80GB/2.5" Display: On Board (using DVI) DVD-ROM: Pioneer / DVD-232DW 18X SATA Power: EDAC / EA11011D-120 Delta / GPS-500BB 500W O.S.: Windows 8.1 Embedded Pro 64Bit (with update 1) (English) Test Summary: Environment Temp.:20.0℃ CPU Temp.:40.5℃ CPU Temp. after 3DMark:40.0℃ 1.AIDA64 Cache and Memory Benchmark Ver.5.60.3700 READ:30180 MB/s WRITE:32822 MB/s COPY:30435 MB/s 2.PassMark Performance Test 8.0 Build 1053 CPU Mark:5804 Memory Mark:2890 3.3DMark for Windows Ver.1.5.915 Cloud Gate:7182 Ice Storm:50509 Sky Diver:3941 Strike Test:941</p>	Pass
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No.	DDR4 Module	Test Environment	Result
6	ADATA (AD4S2133W4G15-BHYM 1.2V) [512Mx8b-x8/512Mx64b 1066MHz@CL=15,tRCD=15,tRP=15] / ADATA (4WQA-0915A-M1511V) / PC4-17000 (DDR4-2133) / 4GB *2	M/B: SD101-H110N Rev.2 (021) (BSF511400010) M/B BIOS: Insyde 01/20/2016 M/B Driver: Demo ver.0.2.1512.0 CPU: Intel / Pentium-G4400TE (Skylake-S/R0-SR2LT) / 2.4GHz DIMM Slot: DIMM-1/2 (Dual channel) SSD: Intel / SSDSC2CT080A4 SATA3 80GB/2.5" Display: On Board (using DVI) DVD-ROM: Pioneer / DVD-232DW 18X SATA Power: EDAC / EA11011D-120 Delta / GPS-500BB 500W O.S.: Windows 8.1 Embedded Pro 64Bit (with update 1) (English) Test Summary: Environment Temp.:23.6°C CPU Temp.:30.0°C CPU Temp. after 3DMark:32.0°C 1.AIDA64 Cache and Memory Benchmark Ver.5.60.3700 READ:27221 MB/s WRITE:31652 MB/s COPY:26931 MB/s 2.PassMark Performance Test 8.0 Build 1053 CPU Mark:2895 Memory Mark:2114 3.3DMark for Windows Ver.1.5.915 Cloud Gate:3207 Ice Storm:20805 Sky Diver:2074 Strike Test:538	Pass

7	<p>Innodisk (M4SR-4GSSNCOG-D 1.2V)</p> <p>[512Mx8b-x8/512Mx64b</p> <p>1066MHz@CL=15,tRCD=15,tRP=15] /</p> <p>SEC (K4A4G085WD-BCPB) /</p> <p>PC4-17000 (DDR4-2133) /</p> <p>4GB *2</p>	<p>M/B: SD101-H110N Rev.2 (021) (BSF511400010)</p> <p>M/B BIOS: Insyde 01/20/2016</p> <p>M/B Driver: Demo ver.0.2.1512.0</p> <p>CPU: Intel / Celeron G3900TE (Skylake-S/R0-SR2LU) / 2.3GHz</p> <p>DIMM Slot: DIMM-1/2 (Dual channel)</p> <p>SSD: Intel / SSDSC2CT080A4 SATA3 80GB/2.5"</p> <p>Display: On Board (using DVI)</p> <p>DVD-ROM: Pioneer / DVD-232DW 18X SATA</p> <p>Power: EDAC / EA11011D-120</p> <p style="padding-left: 20px;">Delta / GPS-500BB 500W</p> <p>O.S.: Windows 8.1 Embedded Pro 64Bit (with update 1) (English)</p> <p>Test Summary: Environment Temp.:23.7°C</p> <p style="padding-left: 20px;">CPU Temp.:19.5°C</p> <p style="padding-left: 20px;">CPU Temp. after 3DMark:18.5°C</p> <p>1.AIDA64 Cache and Memory Benchmark Ver.5.60.3700</p> <p style="padding-left: 40px;">READ:26160 MB/s</p> <p style="padding-left: 40px;">WRITE:31739 MB/s</p> <p style="padding-left: 40px;">COPY:26481 MB/s</p> <p>2.PassMark Performance Test 8.0 Build 1053</p> <p style="padding-left: 40px;">CPU Mark:2736</p> <p style="padding-left: 40px;">Memory Mark:2046</p> <p>3.3DMark for Windows Ver.1.5.915</p> <p style="padding-left: 40px;">Cloud Gate:3766</p> <p style="padding-left: 40px;">Ice Storm:24064</p> <p style="padding-left: 40px;">Sky Diver:2156</p> <p style="padding-left: 40px;">Strike Test:536</p>	Pass
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No.	DDR4 Module	Test Environment	Result
8	Kingston (CBD21D4S15HAG 1.2V) [512Mx8-bit/Data Rate:2133Mbps z@CL=15,tRCD=15,tRP=15] / SKhynix (H5AN4G8NAFR-TFC) / PC4-17000 (DDR4-2133) / 4GB *1	M/B: SD101-H110N Rev.2 (021) (BSF511400010) M/B BIOS: Insyde 01/20/2016 M/B Driver: Demo ver.0.2.1512.0 CPU: Intel / Core i5-6500TE (Skylake-S/R0-SR2LR) / 2.3GHz DIMM Slot: DIMM-2 (Single channel) SSD: Intel / SSDSC2CT080A4 SATA3 80GB/2.5" Display: On Board (using DVI) DVD-ROM: Pioneer / DVD-232DW 18X SATA Power: EDAC / EA11011D-120 Delta / GPS-500BB 500W O.S.: Windows 8.1 Embedded Pro 64Bit (with update 1) (English) Test Summary: Environment Temp.:20.3°C CPU Temp.:18.5°C CPU Temp. after 3DMark:17.5°C 1.AIDA64 Cache and Memory Benchmark Ver.5.60.3700 READ:16177 MB/s WRITE:15833 MB/s COPY:15625 MB/s 2.PassMark Performance Test 8.0 Build 1053 CPU Mark:6496 Memory Mark:1792 3.3DMark for Windows Ver.1.5.915 Cloud Gate:6270 Ice Storm:40007 Sky Diver:3518 Strike Test:748	Pass

