

# 1. Stability Test: Rev.011

## 1.1 CPU Function Test:

<b>Test Purpose</b>	Test CPU functions work normally under Windows Operating System
<b>Test Procedure</b>	<ol style="list-style-type: none"> <li>1. Install Windows Operating System</li> <li>2. Install M/B Device Driver</li> <li>3. CPU-Z check CPU info</li> <li>4. Run AIDA64 Cache and Memory Benchmark Ver.5.60.3700 1 time</li> <li>5. Run Passmark Performance Test 8.0 Build1053 1 time</li> <li>6. Run 3DMark for Windows Ver.1.5.915 BenchMark 3 times</li> <li>7. S3/Hibernate Test 3 times</li> </ol>
<b>Test Criteria</b>	It should be no problem for all tests

No.	CPU	Type	CPU Temp.	Result
<b>1</b>	Intel / 2.20GHz	Intel Celeron 3965U (Kabylake /QLYP)	<b>29.0 °C</b>	<b>Pass</b> (was:ID9764, 9773)
<b>2</b>	Intel / 2.40GHz	Intel Core i3-7100U (Kabylake /QLYK)	<b>43.0 °C</b>	<b>Pass</b>
<b>3</b>	Intel / 2.60GHz	Intel Core i5-7300U (Kabylake /QLYG)	<b>30.5 °C</b>	<b>ID9636</b> (was:ID9764)
<b>4</b>	Intel / 2.80GHz	Intel Core i7-7600U (Kabylake/QLYF)	<b>38.5 °C</b>	<b>Pass</b> (was:ID9764)



## 1.2 Memory Function Test:

<b>Test Purpose</b>	Test Memory functions work normally under Windows Operating System
<b>Test Procedure</b>	<ol style="list-style-type: none"> <li>1. Install Windows Operating System</li> <li>2. Install M/B Device Driver</li> <li>3. Run AIDA64 Cache and Memory Benchmark Ver.5.60.3700 1 time</li> <li>4. Run Passmark Performance Test 8.0 Build1053 1 time</li> <li>5. Run 3DMark for Windows Ver.1.5.915 BenchMark 3 times</li> <li>6. S3/Hibernate Test 3 times</li> </ol>
<b>Test Criteria</b>	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	Warning beep sound when no memory install	Pass
4	DIMM Slot1	Pass

### 1.2.3 Application Test:

No.	Software	Test Keypoint	Test Environment	Result
1	MemTest86 Ver.7.1	1. Burn-In test 12 hours.	M/B: KU551 Rev.1 (011) (BSH011100005) + EIO-EVT Rev.3 (031) (BSG230700003) M/B BIOS: Insyde 72.15H M/B Driver: KU-Series_EVT_170117_00 CPU: Intel Core i7-7600U 2.80GHz (QLYF) DDR4: ADATA/SEC/16GB*1(AD4S2133316G15-BSSB, K4A8G085WB-BCPB) Kingston / SV300S37A 120GB SSD: On Board Display: Pioneer / DVD-231DW DVD-RW: DELTA / GPS-500BB(500W) Power: EDAC / EA10521C-120  Test Summary.: MemTest86 Ver.7.1 Time: 24:00:43 Pass: 13/50 Error: 0	Pass

### 1.2.4 DDR4 SO-DIMM Approved List:

No.	Brand	Chip	Size	Type	Chip Model No.	Vendor Part No.	Result
1	ADATA	SEC	16GB	PC4-17000 (DDR4-2133)	K4A8G085WB-BCPB	AD4S2133316G15-BSSB 1.2V [512Mx8/1024Mx8,CL=15,tRCD=15,tRP=15]	Pass
2	ADATA	SKhynix	8GB	PC4-17000 (DDR4-2133)	H5AN4G8NAFR-TFC	AD4S2133W8G15-BHYA 1.2V [512Mx8b/1024Mx8b,2133MHz@CL=15,tRCD=15 tRP=15,tRAS=15]	Pass



### 1.2.5 DDR4 SO-DIMM Test Procedures:

No.	DDR4 Module	Test Environment	Result
1	ADATA (AD4S2133316G15-BSSB 1.2V) [512Mx8/1024Mx8,CL=15,tRCD=15,tRP=15] / SEC (K4A8G085WB-BCPB) / PC4-17000 (DDR4-2133) / 16GB *1	<p>M/B: KU551Rev.1 (011) (BSH011100005)+ EIO-EVTRev.3 (031) (BSG230700003)</p> <p>M/B BIOS: Insyde 74.24A</p> <p>M/B Driver: KU-Series_EVT_170117_00</p> <p>CPU: Intel Core i7-7600U 2.80GHz (QLYF)</p> <p>DIMM Slot: DIMM-1 SINGLE Channel Kingston / SV300S37A 120GB</p> <p>SDD: On Board</p> <p>Display: Pioneer / DVD-231DW</p> <p>DVD-RW: DELTA / GPS-500BB(500W)</p> <p>Power: EDAC / EA10521C-120</p> <p>O.S.: Windows 10 IOT Enterprise CBB x64 (Version 1607 Build 14393.321)UEFI</p> <p>Test Summary: Environment Temp.:23.0 CPU Temp.38.5C CPU Temp. after 3DMark:38C</p> <p>AIDA64 Cache and Memory Benchmark(V5.80.4000) SINGLE CHANNEL(DIMM-1) READ:15271 MB/s WRITE:14832 MB/s COPY:15447 MB/s</p> <p>Passmark PerformanceTest 9.0 Build 1006 CPU Mark:5641.5 Memory Mark:2205.7</p>	<b>Pass (was: ID9764)</b>
2	ADATA (AD4S2133W8G15-BHYA 1.2V) [512Mx8b/1024Mx8b,2133MHz@CL=15, tRCD=15 tRP=15,tRAS=15] / SKhynix (H5AN4G8NAFR-TFC) / PC4-17000 (DDR4-2133) / 8GB *1	<p>M/B: KU551Rev.1(011) (BSH011000004)+ EIO-EVTRev.3 (031) (BSG230700003)</p> <p>M/B BIOS: Insyde 72.15H</p> <p>M/B Driver: KU-Series_EVT_170117_00</p> <p>CPU: Intel i3-7100U 2.40GHz (QLYK)</p> <p>DIMM Slot: DIMM-1 SINGLE Channel WD / WD3200LPVX 320GB</p> <p>HDD: On Board</p> <p>Display: Asus / SDRW-08D2S-U/BLK/G/AS</p> <p>DVD-RW: LEPA / N500-SB NU 500W</p> <p>Power: Windows 10 IOT Enterprise CBB x64 (Version 1607 Build 14393.321)UEFI</p> <p>O.S.: Environment Temp.:23.1</p> <p>Test Summary: CPU Temp.:43.0C CPU Temp. after 3DMark:53.5C</p> <p>AIDA64 Cache and Memory Benchmark(V5.80.4000) SINGLE CHANNEL(DIMM-1) READ:14921 MB/s WRITE:14506 MB/s COPY:14576 MB/s</p> <p>Passmark PerformanceTest 9.0 Build 1006 CPU Mark:3942.4 Memory Mark:1710.8</p> <p>3DMark for Windows(V 2.2.3509)3times Cloud Gate:5093 Ice Storm Extreme:33005 Skydiver:3307 Fire Strike:712</p>	<b>Pass</b>



No.	DDR4 Module	Test Environment	Result
3	ADATA (AD4S2133W8G15-BHYA 1.2V) [512Mx8b/1024Mx8b,2133MHz@CL=15, tRCD=15 tRP=15,tRAS=15] / SKhynix (H5AN4G8NAFR-TFC) / PC4-17000 (DDR4-2133) / 8GB *1	M/B: KU551 Rev.1 (011) (BSH011100001) + EIO-EVT Rev.3 (031) (BSG230700003) Insyde 74.24A M/B BIOS: M/B Driver: KU-Series_EVT_170117_00 CPU: Intel Core 3965U 2.20GHz (QLYP) DIMM Slot: DIMM-1 SINGLE Channel WD / WD3200LPVX 320GB HDD: On Board Display: ASUS / SDRW-08D2S-U/BLK/G/AS DVD-RW: EDAC / EA11011D-120 Power: Windows 10 IOT Enterprise CBB x64 (Version 1607 Build O.S.: 14393.321)UEFI Environment Temp.:21.6 Test Summary: CPU Temp.:29.0C CPU Temp. after 3DMark:28.5C  AIDA64 Cache and Memory Benchmark(V5.80.4000) SINGLE CHANNEL(DIMM-1) READ:12728 MB/s WRITE:12116 MB/s COPY:12157 MB/s  Passmark PerformanceTest 9.0 Build 1006 CPU Mark:2367.4 Memory Mark:1434.1	<b>Pass</b> (was: <b>ID9764)</b>
4	ADATA (AD4S2133W8G15-BHYA 1.2V) [512Mx8b/1024Mx8b,2133MHz@CL=15, tRCD=15 tRP=15,tRAS=15] / SKhynix (H5AN4G8NAFR-TFC) / PC4-17000 (DDR4-2133) / 8GB *1	M/B: KU551 Rev.1 (011) (BSH011100005) + EIO-EVT Rev.3 (031) (BSG230700003) Insyde 74.24A M/B BIOS: M/B Driver: KU-Series_EVT_170117_00 CPU: Intel Core i5-7300U 2.60GHz(QLYG) DIMM Slot: DIMM-1 SINGLE Channel WD / WD3200LPVX 320GB SSD: On Board Display: Asus / SDRW-08D2S-U/BLK/G/AS DVD-RW: EDAC / EA11011D-120 Power: Windows 10 IOT Enterprise CBB x64 O.S.: (Version 1607 Build 14393.321)UEFI Environment Temp.:22.6 Test Summary: CPU Temp.:30.5C CPU Temp. after 3DMark:43C  AIDA64 Cache and Memory Benchmark(V5.80.4000) SINGLE CHANNEL(DIMM-1) READ:14984 MB/s WRITE:14340 MB/s COPY:15010 MB/s  Passmark PerformanceTest 9.0 Build 1006 CPU Mark:5323.9 Memory Mark:1986.8	<b>Pass</b> (was: <b>ID9764)</b>