

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. CPU-Z check CPU info 4. Run AIDA64 cache and Memory Benchmark Ver.5.00.3300 1 time 5. Run Passmark Performance Test 8.0 Build1040 1 time 6. Run 3DMark for Windows Ver.1.4.828 BenchMark 3 times 7. S3/Hibernate Test 3 times |
| Test Criteria | It should be correct for each test step |

| No. | CPU | Type | Result |
|-----|--------------|--|--------|
| 1 | AMD / 2.7GHz | Embedded R-Series RX-427BB (Quad Core/Bald Eagle-KV-A1/RE427BDGH44JA/Radeon R7 series) / 35W / 854-micro-BGA FP3 | Pass |
| 2 | AMD / 2.5GHz | Embedded R-Series RX-425BB (Quad Core/Bald Eagle-KV-A1/RE425BDGH44JA/Radeon R6 series) / 35W / 854-micro-BGA FP3 | Pass |
| 3 | AMD / 2.2GHz | Embedded R-Series RX-225FB (Dual Core/Bald Eagle-KV-A1/RE225FECH23JA/Radeon R4 series) / 17W / 854-micro-BGA FP3 | 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.5.00.3300 1 time 4. Run Passmark Performance Test 8.0 Build1040 1 time 5. Run 3DMark for Windows Ver.1.4.828 BenchMark 3 times 6. S3/Hibernate Test 3 times |
| Test Criteria | It should be no problem for the test |

1.2.1 DDRIII:

| No. | Function | Result |
|-----|--------------------------|--------|
| 1 | DDRIII DIMM Slot Examine | Pass |
| 2 | Single Channel mode | Pass |
| 3 | Dual channel mode | Pass |
| 4 | DIMM Slot1 | Pass |
| 5 | DIMM Slot2 | Pass |

1.2.2 Application Test:

| No. | Software | Test Keypoint | Test Environment | Result |
|-----|------------------------|--------------------------|--|--------|
| 1 | MemTest86 Ver.4.3.7 | 1. Stress test 24 hours. | M/B: BE171-77EN-225B Rev.2 (021) (BSF101600003) M/B BIOS: AMI-Aptio 02/24/2015 M/B Driver: Demo Mar/26/2015 CPU: AMD / Embedded R-Series RX-225FB (Dual Core/RE225FECH23JA) / 2.2GHz DDR3: ADATA (ADDS1600W8G11- BMIE (10281788) 1.35V/1.5V) [512Mx8b-x16/1GBx64b,CL=11-11-11] / Micron (3DE77D9Q8J) / PC3L-12800 (DDR3L-1600) / 8GB *2 Display: On-board Power: EDAC / E 10521C-120 O.S.: DOS | Pass |

1.2.3 DDR4 Approved List:

| No. | Brand | Chip | Size | Type | Chip Model No. | Vendor Part No. | Result |
|-----|-----------|--------|------|----------------------------|-----------------|--|--------|
| 1 | Transcend | Micron | 8GB | PC3-14900 (DDR3-1866) | 4JN41 D9RVX | TS1GSK64V8H 1.5V [512Mx8b-x16/1024 Mx64b,CL=13] | Pass |
| 2 | Apacer | SEC | 4GB | PC3-14900 (DDR3-1866) | K4B4G0846D-BCMA | 78. 2GDJ.4040B 1.5 V [51 Mx8b-x8/12Mx64b, CL=13 ,tRCD=13,tRP=13] | Pass |
| 3 | Apacer | SEC | 2GB | PC3-14900 (DDR3-1866) | K4B2G0846Q-BCMA | 78. 2GDH.4040B 1. 5V [25 Mx8b- x8/ 56Mx64b,CL=13 ,Trcd=13,tR P= 3] | Pass |
| 4 | Apacer | Micron | 8GB | PC3L-12800 (DDR3L-1600) | 2ED27-D9PCP | 75.C93DL.G000C 1.3 5V/1.5V [512Mx8b- x16/1024 Mx64b,CL=11] | Pass |

| | | | | | | | |
|-----------|-----------|--------|-----|----------------------------|-----------------|--|-------------|
| 5 | Crucial | Micron | 8GB | PC3L-12800 (DDR3L-1600) | 2RD27D9PCP | CT102464BF160B.16 FDD (MT16KTF1G64HZ-1 G6D1) 1.35/1.5V [512Mx8b- x16/1024 Mx64b,CL=11-11- 11-30] | Pass |
| 6 | ADATA | Micron | 8GB | PC3L-12800 (DDR3L-1600) | 3DE77D9Q8J | ADDS1600W8G11-B MIE (10281788) 1.35V/1.5V [512Mx8b-x16/1GBx 64b,CL=11-11-11] | Pass |
| 7 | ADATA | Micron | 8GB | PC3L-12800 (DDR3L-1600) | 3KE77D9QBJ | ADDS1600W8G11-B MIE 1.35V/1.5V [51 Mx8b- x16/1GBx 64b,CL=11-11-11] | Pass |
| 8 | INNODISK | Micron | 4GB | PC3L-12800 (DDR3L-1600) | 1XM77-D9PFJ | M3SP-4GMJDL0C-M 1.35V/1.5V [256Mx8b-x16/512M x64b,CL=9] | Pass |
| 9 | Apacer | Micron | 4GB | PC3L-12800 (DDR3L-1600) | 2DM77-D9PFJ | 75.B83DL.G000C 1.3 5V/1.5V [256Mx8b- x16/512M x64b,CL=11] | Pass |
| 10 | Crucial | Micron | 4GB | PC3L-12800 (DDR3L-1600) | 2RM77D9PFJ | CT51264BF160B.16F MR (MT16KTF51264HZ- 1G6M1) 1.35V/135V [256Mx8b-x16/512M x64b,CL=11-11-11- 30] | Pass |
| 11 | ADATA | Micron | 4GB | PC3L-12800 (DDR3L-1600) | 3DE77D9Q8J | ADDS1600W4G11-B MIE (10281820) 1.35V/1.5V [512Mx8b-x8/512Mx 64b,CL=11-11-11] | Pass |
| 12 | ADATA | Micron | 2GB | PC3L-12800 (DDR3L-1600) | 4IK77D9PSH | ADDS1600C2G11-B MIK 1.35V/1.5V [25 Mx8b- x8/256Mx 64b,CL=11-11- 1] | Pass |
| 13 | Hynix | Hynix | 1GB | PC3-12800 (DDR3-1600) | H5TQ2G63BFR PBC | HMT312S6BFR6C-PB NO 1.5 [128Mx16b-x4/128M x64b,CL=11] | Pass |
| 14 | DSL | Hynix | 4GB | PC3-10600 (DDR3-1333) | H5TQ2G83BFR H9C | D3SH56082XH15AA 1.5V | Pass |
| 15 | Transcend | Hynix | 2GB | PC3-10600 (DDR3L-1333) | H5TQ2G83BFR-H9C | TS256MSK64W3N 1. 35V/1.5V [256Mx8b- x8/256Mx 64b,CL=9] | Pass |
| 16 | Crucial | Micron | 1GB | PC3-10600 (DDR3-1333) | 0NDI2-D9LGQ | CT12864BC1339.4FD 1.5V [128Mx16b-x4/128M x64b,CL=9] | Pass |
| 17 | Transcend | Hynix | 4GB | PC3-8500 (DDR3-1066) | H5TQ2G83AFRH9C | TS512MSK64V1N 1. 5V [256Mx8b/512Mx64 b,CL=7- 7-7-20] | Pass |
| 18 | Kingston | ELPIDA | 2GB | PC3-8500 (DDR3-1066) | J1108BABG-DJ-E | KVR1066D3S7/2G 1..5V [128Mx8bits/256Mx6 4bits,CL=7-7-7-20] | Pass |

1.2.4 DDR3 Module Test Procedures:

| No. | DDR4 Module | Test Procedures | Result |
|-----|---|--|--------|
| 1 | Transcend (TS1GSK64V8H 1.5V) [512Mx8b-x16/1024Mx64b,CL=13] / Micron (4JN41 D9RVX) / PC3-14900 (DDR3-1866) / 8GB *2 | <p>M/B: BE170-77EN-427B Rev.2 (021) (BSF101200007) M/B BIOS: AMI-Aptio 02/24/201 M/B Driver: Demo Mar/26/2015 CPU: AMD / Embedded R-Series RX-427BB (Quad Core/RE427BDGH44JA) / 2.7GHz DIMM Slot: DIMM-1/2 (Dual channel) SSD: SanDisk / SDSSDHP-128G SATA3 128G B/2.5" Display: On-board (using DisplayPort) DVD-RW: Lite-On / It iHAS324-07 SATA Power: Jagier / KY-580ATX 480W O.S.: Windows 8.1 Embedded Pro 64Bit (with update 1) (English) Test Summary: 1. AIDA64 Cache and Memory Benchmark Ver.5.00.3300 READ:17413 MB/s WRITE:9472 MB/s COPY:16662 MB/s 2. Passmark Performance Test 8.0 Build 1040 CPU Mark:4834 Memory Mark:987 3. 3DMark for Windows Ver.1.4.828 Cloud Gate:5595 Ice Storm Extreme:39990 Skydiver:4975 Fire Strike:1359</p> | Pass |
| 2 | Apacer (78.B2GDJ.4040B 1.5V) [512Mx8b-x8/512Mx6 b, CL=13,tRCD=13,tRP=13] / SEC (K4B4G0846D-BCMA) / PC3-14900 (DDR3-1866) / 4GB *2 | <p>M/B: BE170-77EN-427B Rev.2 (021) (BSF101200007) M/B BIOS: AMI-Aptio 02/24/201 M/B Driver: Demo Mar/26/2015 CPU: AMD / Embedded R-Series RX-427BB (Quad Core/RE427BDGH44JA) / 2.7GHz DIMM Slot: DIMM-1/2 (Dual channel) SSD: SanDisk / SDSSDHP-128G SATA3 128G B/2.5" Display: On-board (using DisplayPort) DVD-RW: DVD-RW: Lite-On / It iHAS324-07 SATA Power: Jagier / KY-580ATX 480W O.S.: Windows 7 Ultimate 64Bit (English) & S P1 Test Summary: 1. AIDA64 Cache and Memory Benchmark Ver.5.00.3300 READ:17254 MB/s WRITE:9502 MB/s COPY:16799 MB/s 2. Passmark Performance Test 8.0 Build 1040 CPU Mark:4869 Memory Mark:957 3. 3DMark for Windows Ver.1.4.828 Cloud Gate:5670 Ice Storm Extreme:37531 Skydiver:4926 Fire Strike:1310</p> | Pass |
| 3 | Apacer (78.A2GDH.4040B 1.5V) [256Mx8b-x8/256Mx64b,CL=13, Trcd=13,tRP=13] / SEC (K4B2G0846Q-BCMA) / PC3-14900 (DDR3-1866) / 2GB *2 | <p>M/B: BE170-77EN-427B Rev.2 (021) (BSF101200007) M/B BIOS: AMI-Aptio 02/24/201 M/B Driver: Demo Mar/26/2015 CPU: AMD / Embedded R-Series RX-427BB (Quad Core/RE427BDGH44JA) / 2.7GHz DIMM Slot: DIMM-1/2 (Dual channel) SSD: SanDisk / SDSSDHP-128G SATA3 128G B/2.5" Display: On-board (using DisplayPort) DVD-RW: Lite-On / It iHAS324-07 SATA Power: Jagier / KY-580ATX 480W O.S.: Windows 7 Ultimate 32Bit (English) & S P1 Test Summary: 1. AIDA64 Cache and Memory Benchmark Ver.5.00.3300 READ:17688 MB/s WRITE:9357 MB/s COPY:17820 MB/s 2. Passmark Performance Test 8.0 Build 1040 CPU Mark:3504 Memory Mark:751 3. 3DMark for Windows Ver.1.4.828 Cloud Gate:5611 Ice Storm Extreme:38020 Skydiver:4964 Fire Strike:1255</p> | Pass |

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| 4 | <p>Apacer (75.C93DL.G000C 1.35V/1.5V) [512Mx8b-x16/1024Mx64b,CL=11] / Micron (2ED27-D9PCP) / PC3L-12800 (DDR3L-1600) / 8GB *1</p> | <p>M/B: BE171-77EN-225B Rev.2 (021) (BSF101600003) M/B BIOS: AMI-Aptio 02/24/201 M/B Driver: Demo Mar/26/2015 CPU: AMD / Embedded R-Series RX-225FB (Dual Core/RE225FECH23JA) / 2.2GHz DIMM Slot: DIMM-1 (Single channel) SSD: SanDisk / SDSSDHP-128G SATA3 128G B/2.5" Display: On-board (using DisplayPort) DVD-RW: Lite-On / It iHAS324-07 SATA Power: FSP / FSP060-1AD101C O.S.: Windows 8.1 Embedded Pro 64Bit (with update 1) (English) Test Summary: AIDA64 Cache and Memory Benchmark Ver.5.00.3300 READ:8955 MB/s WRITE:5387 MB/s COPY:8325 MB/s 2. Passmark Performance Test 8.0 Build 1040 CPU Mark:1849 Memory Mark:689 3. 3DMark for Windows Ver.1.4.828 Cloud Gate:2100 Ice Storm Extreme:15655 Skydiver:1517 Fire Strike:428</p> | Pass |
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