

EMB-CV1

Intel Cedarview Mini-ITX Motherboard

P5 Verification Test Report

| Summary | <input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> Pass with Deviation (Comment: _____) | | | |
|-----------------|--|-------|-------|-------------|
| | Test Results Category | | | |
| | Critical | Major | Minor | Enhancement |
| Defect Found | 0 | 0 | 0 | 0 |
| Defect Unsolved | 0 | 0 | 0 | 0 |

Issue date

2012/6/12

Approval

Vincent Chen

Test Engineer

Louie Lee

Version Released Records

| Date | Version | Change History | Note |
|------------|-----------|--|------|
| 2010/04/21 | P3-1001 | 1. Re-composing test Items | |
| 2010/06/01 | P2P3-1001 | 1. New Test Report | |
| 2010/06/21 | P2P3-1002 | 1. Add BIOS -> SPI ROM Setting (South Bridge - GPIO) | |
| 2010/12/02 | P2P2-1003 | 1. New Test Report | |
| 2011/02/23 | P2P3-1101 | 1. Re-composing test Items | |
| 2011/03/04 | P2P3-1102 | 1. Add Specification Validation | |

Note :

For all test items in this report, 3 results have been defined and described as follow:

Pass: Functionality work perfectly
Fail: Functionality failed and must be resolved in the next version
N/A: Functionality Not Applicable or Not Available

This test report will be updated when re-test completed in next version of the product.

Specification Validation

Main Specification

| Item | Specification | Result | | | Note |
|---------------------|--|-------------------------------------|--------------------------|--------------------------|------|
| | | Pass | Fail | N/A | |
| Form Factor | Mini-ITX motherboard | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Processor | Intel® Atom™ processor D2550 Dual Core 1.86GHz (TDP<=10W) FCBGA 559 balls (22mm x 22mm) (BOM option) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| System Memory | Single-Channel with two 204-pin DDR3 800 /1066 SO-DIMM, up to 4 GB max., non-ECC, un-buffered memory with 0.6mm pitch SMT socket | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Chipset | Intel® NM10 Express chipset (TDP 1.5~2W ,average power < 0.85W) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Ethernet | 2 x Realtek 8111E for 10/100/1000Base-TX with two RJ-45 connector | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Audio | VIA 6-CH High-Definition Audio CODEC, Line-in, Mic-in, Line-out | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Expansion Interface | 1 x PCIe x1 1 x mini card (PCIe & USB 2.0 and SIM) and mSATA (BOM option) with screw type socket 1 x SIM card | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| I/O Chip | ITE IT8783F | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Storage | 2 x SATA2 3Gb/s | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Digital I/O | Supports 8-bit (Programmable) with 2 x 5 pin 2.0mm header | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Watchdog timer | Time-out occurs after 1~255 second/minute cause a reset to the system | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| H/W Monitor | Supports Power Supply Voltage, Fan Speed and Temperature Monitoring. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Fan | CPU and System Fan | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Buzzer | Yes | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Battery | Lithium 3V/220mAh with vertical socket type | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Power Requirement | DC 12V (selectable AT/ATX mode for power on) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Chipset | Intel® Graphics Media Accelerator 3650 (Gfx frequency 640MHz / DX10.1) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

| | | | | | |
|----------------------|---|-------------------------------------|--------------------------|--------------------------|--|
| Resolution | Up to 1920 x 1200 / 60Hz at 355MHz Max for CRT Up to 1440 x 900 / 60Hz, 18bpps for LVDS Up to 1920 x1200 / 60Mz for DVI Two display pipes, Pipe A and B support the dual independent displays | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| LVDS Interface | Single 18-bit or 24-bit LVDS | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| KB & Mouse | 1 x KB/MS with 2x3 pin header 2.0mm | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| SATA | 2 x SATA2 ports with 180D black SATA2 connector 1 x 4 pin wafer pitch 2.54mm connector with 5V / 2A & 12V / 1A pin header | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Serial Port | 1 x RS-232 (COM1) via D-sub9 connector on rear IO. 1 x RS-232/422/485 (COM2) via D-sub 9 connector on rear IO with +12V / +5V powered 3 x RS-232 (COM3,4,5) via 2 x 5pin 2.0mm box-header | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Universal Serial Bus | 7 x USB 2.0 supported USB 1&2 via double deck USB and RJ45 connector on rear IO USB 3&4 via double deck USB and RJ45 connector on rear IO USB 5&6 via internal 2 x 5 pin 2.0mm pin header USB 7 via internal 1 x 5 pin 2.0mm pin header (BOM option) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Audio | 3 x Audio phone Jack (Line-in, Mic-in, Line-out) on rear IO | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Ethernet | 2 x RJ45 w/ LED on rear IO 10M: black 100M: Green 1G: Orange Active: flash Orange Link: lighting Orange | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Display | 1 x VGA with D-sub 15 on rear IO 1 x DVI with 24 pin DVI-D connector 1 x LVDS with 30P,1.0mm LVDS connector 1 x backlight and brightness control (PWM mode) with 8 pin wafer (0-3.3V) 1 x LVDS controller board power is 3.3V/5V with 1.5A selectable by jumper as a 1 x 3 2.54mm pin header (default 3.3V) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| LPT | 1 x 2X13P 2.54mm pin header | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

| | | | | | |
|------------------------------------|--|-------------------------------------|--------------------------|--------------------------|--|
| Power input | 1 x 12VDC Jack with screw type 1 x 4 pin ATX | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Front Panel | 1 x HD LED 1 x Power LED | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Others connector and Jumper Header | 1 x smart-fan supported for system fan with 2.54mm wafer 1 x 3 pin header for AT and ATX mode selection | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

O.S. Support

| Item | Specification | Result | | | Note |
|--------------------|---|-------------------------------------|--------------------------|-------------------------------------|------|
| | | Pass | Fail | N/A | |
| Microsoft Embedded | Windows XP Embedded, WES2009 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | WES7 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Microsoft Windows | Windows XP Pro, 32bit / 64bit | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | Windows 7, 32bit | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Linux | Linux kernel 2.6.x or above for Ubuntu, Fedora, Red Hat | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

Environmental Specifications

| Item | Specification |
|-----------------------|--------------------------|
| Operating temperature | 32~140 ℉ (0~60 ℃) |
| Storage temperature | -40~176 ℉ (-40~80 ℃) |
| Operating Humidity | 5%~95%RH, non-condensing |
| EMC | CE & FCC part15 Class A |

Note: Please refer to Environment Test Report for detail information

Platform Information

| Item | Device Information | Test Item |
|---|--|-------------------|
| PCB Model / Version | EMB-CV1 Rev 1.02 | 1,2,3,4,5,6,7,8,9 |
| CPU Board | N/A | N/A |
| Carrier Board | N/A | N/A |
| BIOS / Version | EMB-CV1 R1.3(ECV1AM13) (06/06/2012) | 1,2,3,4,5,6,7,8,9 |
| CPU Type | Intel® Atom™ Processor D2550 (1M Cache, 1.86 GHz) | 1,2,3,4,5,6,7,8,9 |
| Memory Type | Transcend DDR3 1066 2GB SODIMM CL7-Hynix H5TQ2G83BFR H9C 105VA x2 Panram DDR3-1333 CL9 2GB-Hynix H5TQ2G83CFR H9C 139E | 1,2,3,4,5,6,7,8,9 |
| SATA HDD | FUJITSU 2.5" SATA 80GB-MHZ2080BH G2 TOSHIBA 2.5" SATA 160GB- MK1676GSX HITACHI 3.5" SATA 2 500GB- HDS721050CLA362 | 1,2,3,4,5,6,7,8,9 |
| SATA DVD-ROM | Pioneer SATA 18X DVR-212BK PIONEER 20X DVD/CD Writer DVR-215BK | 1,2,3,4,5,6,7,8,9 |
| USB DVD-ROM | Aopen EDR8865U Pioneer DVR-XD 10T | 1,2,3,4,5,6,7,8,9 |
| LCD Monitor | EIZNO EV2335W 23.5" | 1,2,3,4,5,6,7,8,9 |
| | Asus VE228H 22" | 1,2,3,4,5,6,7,8,9 |
| | Viewsonic VT2430-NT 24" | 1,2,3,4,5,6,7,8,9 |
| | DELL U2410 24" | 1,2,3,4,5,6,7,8,9 |
| | PHILIPS 244E2SB/96 24" | 1,2,3,4,5,6,7,8,9 |
| LVDS | Toshiba /12.1"/1280 x 768 x 18bit (16:9) AU M170XW01 V.1 / 17" / 1280x768 / 24bit (16:9) | 1,2,3,4,5,6,7,8,9 |
| Compact Flash | N/A | N/A |
| Daughter Board | N/A | N/A |
| Expansion Board | N/A | N/A |
| | N/A | N/A |
| Operating System | <input checked="" type="checkbox"/> Fedora core15 kernel 2.6.38.6-26.rc1.fc15.i686.PAE | 7-1 |
| | <input checked="" type="checkbox"/> Windows 7 Ultimate SP1 English Version 32 Bit | 7-2 |
| | <input type="checkbox"/> Windows XP Professional English SP3 32/64 Bit | 7-3 |
| Power Supply | DC Adapter: ITE Power Supply PW160 | 1,2,3,4,5,6,7,8,9 |
| | DC Adapter: EDACPOWER EA1050A | |
| Chipset Information with 7 Ultimate SP1 English Version 32 Bit Driver Version | | |
| Chipset Software | Intel(R) Chipset Device Software 9.2.2.1034 (7/20/2011) | |
| North Bridge | Embedded in Intel CedarView CPU (D2550) | |
| South Bridge | Intel NM10 | |
| Super IO Chipset | ITE IT8783F | |
| VGA Chipset | Intel Graphics Media Accelerator 3600 Series 8.14.8.1077(03/06/2012) | |
| Audio Chipset | VIA High Definition Audio 6.0.1.8700(8/4/2010) | |
| Ethernet Chipset | Realtek PCIe GBE Family Controller 7.48.823.2011(8/23/2011) | |
| | Realtek PCIe GBE Family Controller 7.48.823.2011(8/23/2011) | |

Summary Table of contents:

Platform Information 6

1. Hardware Test 8

 1.1. CPU Compatibility Test..... 8

 1.2. Memory Compatibility Test 8

 1.3. SATA Compatibility Test..... 8

2. Basic Function Test..... 9

 2.1. Video Function Test 9

 2.2. Audio Function Test..... 11

 2.3. LAN Function Test..... 11

 2.4. 2.4. Jumper Setting and Connector Test 13

3. Integration Test..... 14

 3.1. USB Port Integration Test..... 14

 3.2. Digital I/O Port Test 14

 3.3. COM Port Integration Test..... 14

 3.4. RS-422 / RS-485 Test..... 15

 3.5. LPT Port Test 15

 3.6. Burn In Test..... 15

4. Application Test..... 16

 4.1. PCI Slot Function (PCI Adapter Card) Test..... 16

 4.2. PCI-Express Function Test..... 16

 4.3. Mini PCI Card Compatibility Test..... 17

 4.4. CardBus (PCMCIA) Compatibility Function Test 17

 4.5. ISA Slot Function Test 17

 4.6. Adapter Compatibility- Industry Control Card PC/104, PC/104+, PCI-104..... 17

 4.7. SSD Modules Compatibility Test 18

 4.8. mSATA Modules Compatibility Test..... 18

 4.9. Riser Card Function Test..... 18

5. Power Consumption Test 19

 5.1. AT/ATX Power Consumption 19

 5.2. PC Health Status..... 19

6. Time Accuracy Test..... 20

 6.1. System Clock & RTC Clock Test..... 20

 6.2. Booting Timer Test..... 20

 6.3. Watchdog Timer Test 20

7. O.S. Compatibility Test 21

 7.1. English Fedora core15 kernel 2.6.38.6-26.rc1.fc15.i686.PAE..... 21

 7.2. Windows 7 Ultimate English Version 32/64Bit 22

 7.3. Windows XP SP3 English Version 32/64Bit..... 23

8. BIOS Function Test 24

 8.1. Advanced Test 24

 8.2. Monitor Test 24

 8.3. Boot Test 24

 8.4. CMOS Backup / Clear CMOS Test 25

 8.5. AAEON Tag Check Utility 25

 8.6. Supervisor / User Password Test 25

9. Performance Test 26

1. Hardware Test

1.1. CPU Compatibility Test

| CPU Information | Result | | | Note |
|---|-------------------------------------|--------------------------|--------------------------|--|
| | Pass | Fail | N/A | |
| Intel® Atom™ Processor D2550 (1M Cache, 1.86 GHz) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Test by Windows 7 32bit & Fedora Core 14– Kernel 2.6.35.6-45.fc14.i686 |

1.2. Memory Compatibility Test

| Memory Information | MEM V4.20 | | | Note |
|--|-------------------------------------|--------------------------|--------------------------|--|
| | Pass | Fail | N/A | |
| Transcend DDR3 1066 2GB SODIMM CL7-Hynix H5TQ2G83BFR H9C 105VA x2 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | DIMM at Slot 1/both (The platform can't boot with DIMM2 only) |
| Transcend DDR3 1333 4GB SEC K4B2G0846C | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Panram DDR3-1333 CL9 2GB-Hynix H5TQ2G83CFR H9C 139E | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Innodisk DDR3 1333 SODIMM 2GB(M3SN-2GHJCC09-B)-Hynix H5TQ2G83BFR H9C 115AK | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| InnoDisk DDR3 1333/4GB M3SN-4GHJDC09-B (Hynix H5TQ2G83BFR) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| InnoDisk DDR3 1333/1GB M3SN-1GHFCC09-D (Hynix H5TQ21G83DFR) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Kingston DDR3 1333 4GB Kingston D256BJENC PGD9U | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| ADATA DDR3 1333 1G ADATA 3BCD-1508H | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| DSL DDR3 1066 4GB CL7 ELPIDA J2108BCSE-DJ-F | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

1.3. SATA Compatibility Test

1.3.1 Onboard SATA Test

| SATA Device Information | | Result | | | Note |
|-------------------------|---------------------------------------|-------------------------------------|--------------------------|--------------------------|------|
| | | Pass | Fail | N/A | |
| HDD | Seagate ST500DM002 500GB/7200rpm 3.5" | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| HDD | TOSHIBA 2.5" SATA 160GB- MK1676GSX | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| DVD | LG GH20 NS15 Multi DVD Rewriter | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

1.3.2 Onboard SATA (AHCI) Test

| SATA AHCI Test | | Result | | | Note |
|--|--|-------------------------------------|--------------------------|--------------------------|------|
| | | Pass | Fail | N/A | |
| Seagate ST500DM002 500GB/7200rpm 3.5" | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Seagate ST9160412AS 160GB/5400rpm 2.5" | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

2. Basic Function Test

2.1. Video Function Test

2.1.1. Single Output Function Test

| Hardware Information with Windows 7 Ultimate English Version 32 Bit Driver Version | | | | | | | | | | |
|--|--|--------------------------|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------|
| CPU | Intel® Atom™ Processor D2550 (1M Cache, 1.86 GHz) | | | | | | | | | |
| Memory | Transcend DDR3-1066 2GB- Hynix H5TQ2G83BFR | | | | | | | | | |
| SATA HDD | TOSHIBA 2.5" SATA 160GB- MK1676GSX | | | | | | | | | |
| VGA | DELL U2410 24" LCD monitor | | | | | | | | | |
| DVI | DELL U2410 24" LCD monitor | | | | | | | | | |
| LVDS | AUO T260XW02 / 26" / 1366x768 / 24bit | | | | | | | | | |
| Color Quality | <input checked="" type="checkbox"/> 16bit <input type="checkbox"/> 24bit <input checked="" type="checkbox"/> 32bit | | | | | | | | | |
| Resolution | VGA | | | DVI | | | LVDS | | | Note |
| | Pass | Fail | N/A | Pass | Fail | N/A | Pass | Fail | N/A | |
| 640X480 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 800X600 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 1024X768 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 1152X864 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 1280X600 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 1280X720 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 1280X768 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 1280X960 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 1280X1024 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 1366/768 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 1400X1050 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 1600X900 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 1600X1200 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 1680X1050 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 1792X1344 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 1856X1392 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 1920X1080 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 1920X1200 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 1920X1440 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 2048X1536 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Rotation | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Rotation (0 / 90 /180 /270°) |

Note: Pay attention to Full Screen under POST screen and Text Mode.

2.1.2. Dual Output Function Test

| Selection | Output | Result | | | Note |
|--------------------|------------|-------------------------------------|--------------------------|-------------------------------------|------|
| | | Pass | Fail | N/A | |
| Dual Display Clone | VGA + DVI | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Dual Display Twin | | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Extended Desktop | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Dual Display Clone | VGA + LVDS | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Dual Display Twin | | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Extended Desktop | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Dual Display Clone | DVI + LVDS | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Dual Display Twin | | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Extended Desktop | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

2.1.3. Video Resolution Test

Test points:

1. Power on without inserting any VGA connector until system reaches Windows desktop
2. Plug VGA connector into test machine while the system is booting to Windows; then check VGA driver and display.
3. Check brightness level and screen behavior of the monitor connected VGA output. The phenomena, normal "Ghost Image" or "Flicker", should be watched carefully.

| | Result | | | Note |
|--------------------|-------------------------------------|--------------------------|--------------------------|------|
| | Pass | Fail | N/A | |
| In Windows Desktop | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

2.1.4. Video Resolution Test

| LVDS Model | | Result | | | Note |
|--|---|-------------------------------------|-------------------------------------|-------------------------------------|------|
| | | Pass | Fail | N/A | |
| LVDS | 1_AUO G065VN01 V.0 / 6.5" / 640x480 / 18bit (4:3) | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | 2_AUO G065VN01 V.0 / 6.5" / 640x480 / 24bit (4:3) | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | 3_Data Image 7" / 800*480 / 18bit (16:9) | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | 4_AU G084SN05 V.3 / 8.4" / 800*600 / 18bit (4:3) | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | 5_AU B104SN02 V.0 / 10.4" / 800*600 / 18bit (4:3) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | 6_AUO G084SN05 v7 / 8.4" / 800*600 / 24bit (4:3) | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | 7_AU G150XG03 V.2 / 15" / 1024*768 / 18bit (4:3) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | 8_AUO LED backlight G121XN01-V0 1024*768 18bit | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | 8_AU M150XN07 V.2 / 15" / 1024x768 / 24bit (4 :3) | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | 9_Toshiba /12.1"/1280 x 768 x 18bit (16:9) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | 10_AU M170EG01 V.D/ 17"/ 1280*1024 / 48bit (4 :3) | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | 11_AU M170XW01 V.1 / 17" / 1280x768 / 24bit (16 :9) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | 12_AUO T260XW02 / 26" / 1366x768 / 24bit | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | 13_AU M201UN02 V.5 / 20.1" / 1600x1200x48bit | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | 14_AUO T370HW01 / 37" / 1920x1080 / 48bit | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 15_AUO M190PW01 V0 / 19"/1440X900/48 bit | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | | |







2.2. Audio Function Test

[] No Support

| Function Test | Result | | | Note |
|---------------------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|
| | Pass | Fail | N/A | |
| L (Left) Channel | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| R (Right) Channel | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| CD_In | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Line In | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| MICROPHONE | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 6-channel mode for 5.1 speaker output | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 8-channel mode for 7.1 speaker output | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| S/P DIF function Test | Input | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| | Output | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

2.3. LAN Function Test

[] No Support

| Connect two computers via different speed LAN HUB by using "Ping" instruction (1000 times) | | | | | | | | | | |
|--|---|---|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------|--|
| 1000MBps LAN HUB | | D-Link DGS-1008D | | | | | | | | |
| 100MBps LAN HUB | | Accton CheetahSwitch Desktop-3005 | | | | | | | | |
| 10MBps LAN HUB | | SVEC FD916H | | | | | | | | |
| OnBoard LAN1 | | Realtek PCIe GBE Family Controller | | | | | MAC Address | | 00-07-32-00-00-07 | |
| OnBoard LAN2 | | Realtek PCIe GBE Family Controller | | | | | MAC Address | | 00-07-32-00-00-08 | |
| LAN Speed | Link / Speed LED | Active LED | LAN 1 | | | LAN 2 | | | Note | |
| | | | Pass | Fail | N/A | Pass | Fail | N/A | | |
| 1000MBps |  |  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |
| 100MBps |  |  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |
| 10MBps |  |  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |
| Wake On LAN | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |
| Boot ROM to Novell 4.11 [RPL] | | | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | | |
| LAN Boot (PXE) | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |
| Internet Browser (DHCP Server) | | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |

2.3.2. Throughput Test

DUT Platform Information:

| | |
|-------------------------------------|--------------------------------------|
| <input type="checkbox"/> | Fedora Core 13 |
| <input type="checkbox"/> | Cent 5.5 |
| <input checked="" type="checkbox"/> | Ubuntu 11.04 Kernel 2.6.38-8-generic |
| <input type="checkbox"/> | Red Hat |

Note : Connection-Level Performance (Interaction Constants Duration Time Set to 60 Sec.)

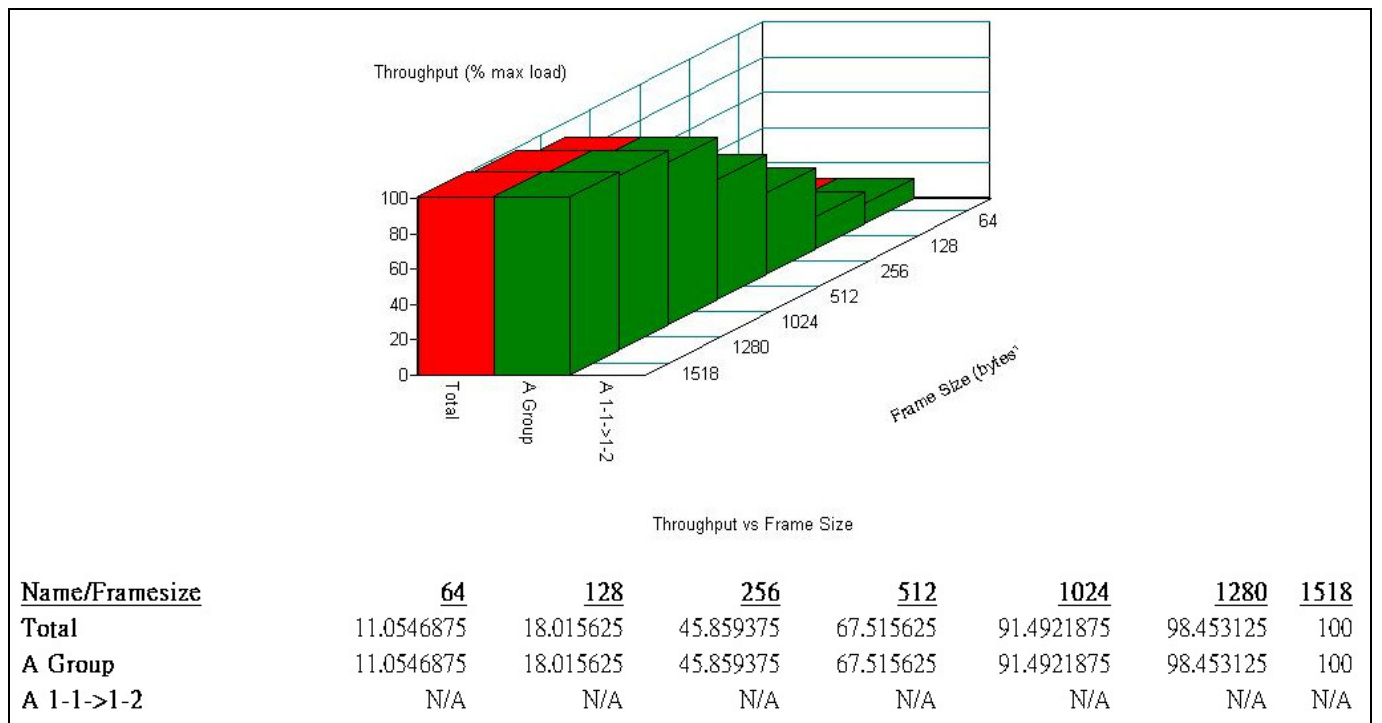
| | |
|----------------|---|
| Graphics Media | Ubuntu 11.04 Default setting |
| LAN | LAN1→Realtek PCIe GBE Family Controller Ethernet: r8168-8.027.00.NAPI |
| | LAN2→Realtek PCIe GBE Family Controller Ethernet: r8168-8.027.00.NAPI |
| Audio Driver | Ubuntu 11.04 Default setting |

SMB Platform Information:

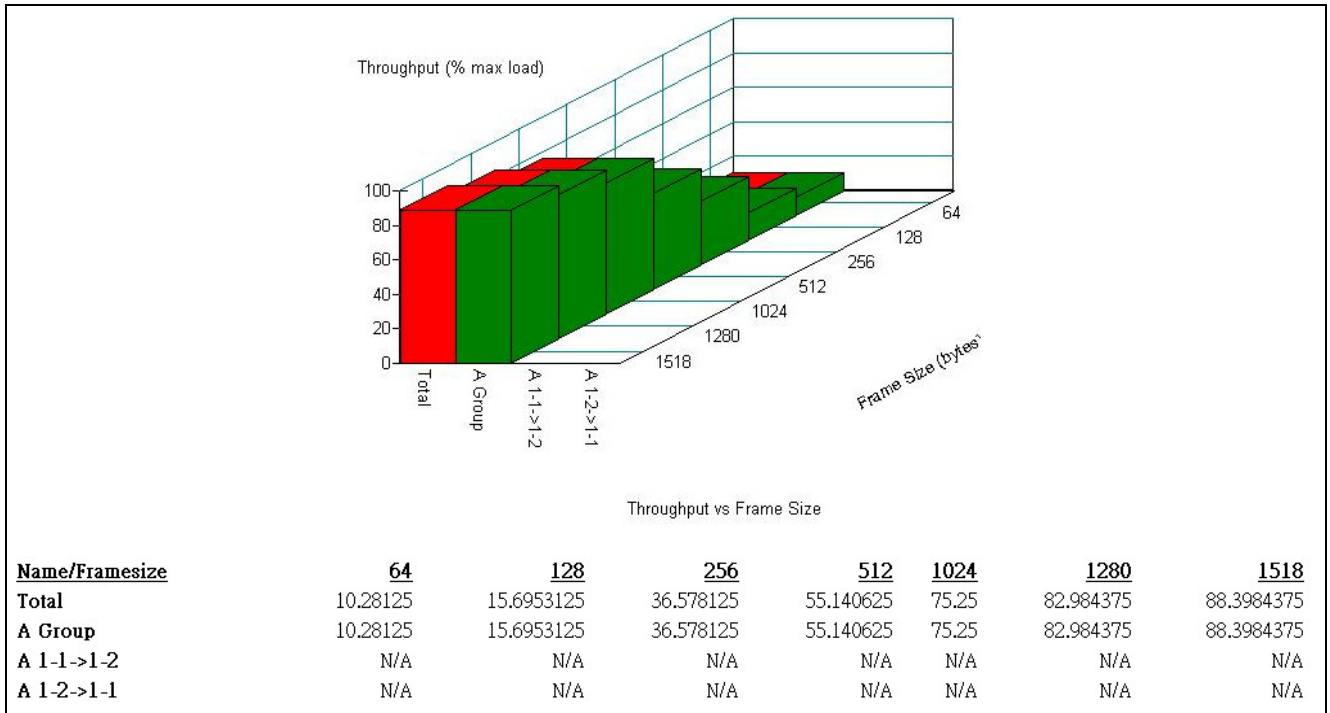
| | |
|------------------|---|
| Chassis | SPIRENT Smartbits 600B |
| Chassis Version | 2.80.003 (Cur) 2.50.000 |
| Chassis Serial # | 06014047 |
| Library | 6.00-29 |
| API | 5.50.42.01 |
| File | 0550042 |
| Module | 2 * LAN-3324A SmartMetrics XD 4-Port 10/100/1000Base-T Gigabit Ethernet |
| Test Software | SmartFlow5.50.42.1 |

Test Result:

1. Half Direction (LAN1: Realtek PCIe GBE Family Controller 10/100/1G Ethernet → LAN2: Realtek PCIe GBE Family Controller 10/100/1G Ethernet)



2. Binary Direction (LAN1: Realtek PCIe GBE Family Controller 10/100/1G Ethernet → LAN2: Realtek PCIe GBE Family Controller 10/100/1G Ethernet)



2.4. 2.4. Jumper Setting and Connector Test

[] No Support

| Function Test | Result | | | Note |
|---|-------------------------------------|--------------------------|-------------------------------------|---|
| | Pass | Fail | N/A | |
| 1. AT mode—AT/ATX mode select | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2. CLRRTC—Clear CMOS | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3. Chassis—Chassis open function switch | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 1-2 Enable 3-4 Disable |
| 4. Digital reference-(COM2 external power select) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 15-16 12V 17-18 RI 19-20 5V |
| 5.LVDS_VDD_SEL—LVDS panel power select | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1-2 3.3V 3-4 5V |
| 6. L_Brightness—LVDS brightness control type select | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1-2 VR mode (5V) 3-4 PWM mode (3.3V) |
| 7. LVDS_Switch—LVDS function Enable | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1-2 Disable 3-4 Enable |
| 8. LCD_Power _Sel—LVDS panel backlight power select | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1-2 12V 3-4 5V |
| 9. WDT—Watch dog timer function switch | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1-2 12V 3-4 5V |

3. Integration Test

| | |
|------------------|---|
| | Hardware Information with Windows 7 Ultimate English Version 32 Bit Driver Version |
| CPU | Intel® Atom™ Processor D2550 (1M Cache, 1.86 GHz) |
| Memory | Transcend DDR3-1066 2GB- Hynix H5TQ2G83BFR |
| SATA HDD | TOSHIBA 2.5" SATA 160GB- MK1676GSX |
| | Chipset Information with 7 Ultimate English SP1 32 Bit Driver Version |
| Chipset Software | Intel(R) Chipset Device Software 9.2.2.1034 (7/20/2011) |
| North Bridge | Embedded in Intel Cedar View CPU (D2550) |
| South Bridge | Intel NM10 |
| Super IO Chipset | ITE IT8783F |
| VGA Chipset | Intel Graphics Media Accelerator 3600 Series 8.14.8.1077(03/06/2012) |
| Audio Chipset | VIA High Definition Audio 6.0.1.8700(8/4/2010) |
| Ethernet Chipset | Realtek PCIe GBE Family Controller 7.48.823.2011(8/23/2011) |
| | Realtek PCIe GBE Family Controller 7.48.823.2011(8/23/2011) |

3.1. USB Port Integration Test

| Item | USB Port | Boot | | | Function(Win 7) | | | Note |
|---|----------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|---|
| | | Pass | Fail | N/A | Pass | Fail | N/A | |
| USB HDD | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| USB FDD Mitsumi D353GUE | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| SONY USB2.0 DVD-R/W DRX-830UL | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| USB Hub Test (Connect USB Device) HUB Port1: USB Keyboard / HUB Port2: USB Mouse / HUB Port3: USB HDD | | | | | | | | |
| USB 2.0 HUB PowerSync / USB 2.0 4 Port HU-155 | | | | | | | | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

3.2. Digital I/O Port Test

| DIO Address (___) | Result | | | Note |
|---------------------|-------------------------------------|--------------------------|--------------------------|------|
| | Pass | Fail | N/A | |
| DIO VCC +5V | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

3.3. COM Port Integration Test

| Test Item | Result | | | Note |
|-----------------------|-------------------------------------|--------------------------|--------------------------|------------------------|
| | Pass | Fail | N/A | |
| Serial Modem Dial Out | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Serial Modem Ring In | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Tested with Modem |
| Serial Modem +12V | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Tested with Multimeter |
| Serial Modem +5V | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Tested with Multimeter |

3.4. RS-422 / RS-485 Test

| Test Item | Result | | | Note |
|-----------------|-------------------------------------|--------------------------|--------------------------|--|
| | Pass | Fail | N/A | |
| RS-422 for COM2 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Use loopback and WINSSD.exe to test RS-422 in Windows |
| | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | The communication between the RS-422 port of two boards is linked with one 1.2km cable on Windows Terminal |
| RS-485 for COM2 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Use ICP CON I-7044D D/IO Module in Windows(Support Auto flow control) |
| | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | The communication between the RS-485 port of two boards is linked with one 1.2km cable on Windows Terminal |

3.5. LPT Port Test

| Test Item | Result | | | Note |
|---------------------------------|-------------------------------------|--------------------------|--------------------------|------|
| | Pass | Fail | N/A | |
| XEROX Phaser 3124 Laser Printer | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

3.6. Burn In Test

Under Room Temperature: 26 °C

| Test Item | Result | | | Note |
|-----------------------|-------------------------------------|--------------------------|--------------------------|---|
| | Pass | Fail | N/A | |
| Burn In Test V7.0 Pro | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Windows 7 Ultimate SP1 English Version 32 Bit |

Note: COM PORT Baud Rate is set to 9600.

4. Application Test

4.1. PCI Slot Function (PCI Adapter Card) Test

| Adapter VGA Card | Set Simultaneous Display and Reboot | | | Note |
|---|-------------------------------------|--------------------------|-------------------------------------|------|
| | Pass | Fail | N/A | |
| CHAINTECH NVIDIA GeForce4 MX440-8X | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Adapter Sound Card | Play Sound | | | Note |
| | Pass | Fail | N/A | |
| Creative Sound BLASTER Live5.1 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Adapter SCSI Card | Copy files to SCSI HDD | | | Note |
| | Pass | Fail | N/A | |
| ADAPTEC Ultra160 SCSI ASC-29160 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Adapter Image Capture Card | Connect to CCD | | | Note |
| | Pass | Fail | N/A | |
| I-VIEW CP-1400AS (with Age STD-477FAI CCD) | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Adapter LAN Card | Connect to Internet | | | Note |
| | Pass | Fail | N/A | |
| Intel GD82559 10/100 Mbps Fast Ethernet Adapter | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| INTEL PWLA8391GTBLK Pro/1000 Giga LAN Card | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Adapter RAID Card | RAID 0 , 1 , 10 Function Test | | | Note |
| | Pass | Fail | N/A | |
| ADAPTEC 1420SA RoHS 4-Port SATA II RAID | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |

4.2. PCI-Express Function Test

| PCI-Express x1 | Function Test | | | Note |
|---|-------------------------------------|--------------------------|-------------------------------------|----------------------|
| | Pass | Fail | N/A | |
| SUNIX SATA1414 eSATA & SATAII x1Express card | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Intel GIGABIT CT DESKTOP DAPTER-EXPI9301CTBLK | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| PCI-Express x4 | Function Test | | | Note |
| | Pass | Fail | N/A | |
| Adaptec AAR-1430SA SATAII HostRAID Controllers PCI-Express x4 RAID Card | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| PCI-Express x16 | Function Test | | | Note |
| | Pass | Fail | N/A | |
| ASUS EAX1600PRO/TD/256M/A (ATI Chipset) PCI-Express x16 VGA Card | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| WINFAST PX6200 TC TDH PCI-Express x16 VGA Card | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Express card | Function Test | | | Note |
| | Pass | Fail | N/A | |
| SUNIX SATA II Express card | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| SunBox 34mm Giga LAN Express Card | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Mini PCI Express Card | Function Test | | | Note |
| | Pass | Fail | N/A | |
| BearTech PCI-E 1X test card | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| AzureWave AW-NB041H 802.11 b/g/n+ 802.15BT combo card (USB/PCI-E Interface) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | PCI-E and USB single |
| COM-ME232S2 RS232 *2 module | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

| | | | | |
|---------------------------------------|-------------------------------------|--------------------------|--------------------------|---------------|
| IO-MESATA 3132ME R1.1 SATAII*2 module | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Sierra Wireless MC8790 3G | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | With SIM card |

4.3. Mini PCI Card Compatibility Test

| Device Item | Function Test | | | Note |
|---|--------------------------|--------------------------|-------------------------------------|------|
| | Pass | Fail | N/A | |
| Mini PCI.10/100 Base-Tx LAN (W/Intel.82551QM .A1.0) (Model:PER-C10L) | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| GM-101 WLAN 11b/g 54Mbps Mini PCI Card (Model: VNT6655AM) | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| ADLINK mPCI-8750 ATI Rage XL Mini PCI VGA Card | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |

4.4. CardBus (PCMCIA) Compatibility Function Test

| Device Item | Bit | Function Test | | | Note |
|---|---------------|--------------------------|--------------------------|-------------------------------------|-------------|
| | | Pass | Fail | N/A | |
| Intel PRO/Wireless 2011B LAN PC Card (WPC2011BWW) | Slot 1 (Up) | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | [PC-200200] |
| | Slot 2 (Down) | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Kingston datapack DP-PCM2 / 2GB (PC Card TypeII HDD) | Slot 1 (Up) | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | [PC-200201] |
| | Slot 2 (Down) | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Pci GW-NS54SG Cardbus Adapter Wireless LAN Type-II | Slot 1 (Up) | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | [PC-200502] |
| | Slot 2 (Down) | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Pci GW-NS54SG Cardbus Adapter Wireless LAN Type-II | Slot 2 (Down) | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | [PC-200502] |

4.5. ISA Slot Function Test

| Test Item | Result | Note |
|--|---|----------|
| | | |
| SCSI Card Adaptec AHA-1520B SCSI Card | <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> | [SS-002] |
| LAN Card NE2000 Compatible LAN Card (RTL8019AS) | <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> | [NW-014] |
| VGA Card CIRRUS LOGIC 5429 FCC ID :ICUVGA-GWV27A | <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> | [VC-008] |

4.6. Adapter Compatibility- Industry Control Card PC/104, PC/104+, PCI-104

4.6.1. Device List: PC/104 Module

| Test Item | Result | | | Note |
|----------------|--------------------------|--------------------------|-------------------------------------|------|
| | Pass | Fail | N/A | |
| AAEON PCM-3660 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |

4.6.2. Device List: PC/104+ Module

| Test Item | Result | | | Note |
|----------------|--------------------------|--------------------------|-------------------------------------|------|
| | Pass | Fail | N/A | |
| AAEON PCM-3430 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |

4.6.3. Device List: PCI-104 Module

| Test Item | Result | | | Note |
|----------------|--------------------------|--------------------------|-------------------------------------|------|
| | Pass | Fail | N/A | |
| AAEON PCM-3730 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |

4.6.4. Device List: PCI/104 Express Module

| Test Item | Result | | | Note |
|---------------|--------------------------|--------------------------|-------------------------------------|------|
| | Pass | Fail | N/A | |
| AAEON PER-123 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |

4.7. SSD Modules Compatibility Test

SSD HDD Compatibility Test:

Cable Type: IDE SATA2 MLC SLC

| Test Item | Result | | | Note |
|---------------------------------|--------------------------|--------------------------|-------------------------------------|------|
| | Pass | Fail | N/A | |
| Transcend SSD 16G - TS16GSSD25S | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |

4.8. mSATA Modules Compatibility Test

| Test Item | | Result | | | Note |
|-----------------------------|------|-------------------------------------|--------------------------|--------------------------|-------------------------------|
| | | Pass | Fail | N/A | |
| Transcend mSATA TS32GMSA300 | 32GB | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Install Win7_32bit (Optional) |

4.9. Riser Card Function Test

| Test Item | | Result | | | Note |
|------------|--|--------------------------|--------------------------|-------------------------------------|------|
| | | Pass | Fail | N/A | |
| LAN | | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| PCI Slot | | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| PCI-e Slot | | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |

5. Power Consumption Test

| Hardware Information with Windows 7 Ultimate English Version 32 Bit Driver Version | |
|--|---|
| CPU | Intel® Atom™ Processor D2550 (1M Cache, 1.86 GHz) |
| Memory | Transcend DDR3 1066 SODIMM CL7 2GB-Hynix H5TQ2G83BFR H9C 105VA x2 |
| SATA HDD | Seagate ST500DM002 500GB/7200rpm 3.5" |

5.1. AT/ATX Power Consumption

| Test Equipment | |
|----------------|---------------------------|
| Equipment | Programmable power supply |
| Manufacturer | GW INSTEK |
| Model name | PSH-3630 |

| 12V Dcin Mode Test Environment | | | | | | |
|---|--|------------|---|---------------|---|---------------------|
| 12V DCin Power Model | GW INSTEK Programmable power supply PSH-3630 | | | | | |
| Keyboard | Microsoft USB keyboard 1366 | | | | | |
| Mouse | Logitech USB Mouse M-U0003 | | | | | |
| Test Mode | Voltage(V) | Current(A) | | Total Watt(W) | | Note |
| (Power on) – Boot sequence: Measure the maximum current value of between system power on and boot-up to O.S. | (+12V) | 1.25 | A | 15 | W | |
| Windows 7 SP1 32bit Idle mode | (+12V) | 0.83 | A | 9.96 | W | |
| (Full Loading Mode) Windows 7 SP1 with Prime 95 Full Loading Test | (+12V) | 1.21 | A | 14.52 | W | Prime95 Version 259 |
| Suspend in Window7 (S3) | (+12V) | 0.07 | A | 0.84 | W | |
| Power off (S5 mode) | (+12V) | 0.03 | A | 0.36 | W | |

5.2. PC Health Status

Test Point: The value between Actual Voltage and Voltage Monitored must be +/- 5%

| Voltage Monitoring Test | Result | | | BIOS (V) | Actual (V) | Note |
|-------------------------|-------------------------------------|--------------------------|--------------------------|----------|------------|------|
| | Pass | Fail | N/A | | | |
| CPU Temperature | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 45°C | 42°C | |
| MB Temperature | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 39°C | 34°C | |
| CPU Fan Speed | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 4655 RPM | 4562 RPM | |
| Chassis Fan1 Speed | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 4655 RPM | 4562 RPM | |
| CPU Voltage | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1.20 | 1.21 | |
| 3.3V Voltage | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 3.34 | 3.34 | |
| 5V Voltage | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 5.168 | 5.08 | |
| 12V Voltage | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 12.160 | 12.13 | |

6. Time Accuracy Test

6.1. System Clock & RTC Clock Test

Under Room Temperature: 26 °C

| Function | Item | Time Interval | Criteria | Actual | | Result | | | Note |
|-----------------------------|------|---------------|----------|--------|-----|-------------------------------------|--------------------------|--------------------------|------|
| | | | | | | Pass | Fail | N/A | |
| RTC Clock in Power On Mode | | 24 hrs | +/-2 sec | 0 | Sec | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| RTC Clock in Power Off Mode | | 24 hrs | +/-2 sec | +1 | Sec | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

6.2. Booting Timer Test

| Installation | Actual | | Note |
|---------------------|--------|-----|---|
| System Booting Time | 11.50 | Sec | Period for "Beep" starts to Sound after pressing Power Button |

6.3. Watchdog Timer Test

Use Function as below:

[] No Support.

| Time-Out Interval | Margin for error | Actual | | Result | | | Note |
|-------------------|------------------|--------|-----|-------------------------------------|--------------------------|--------------------------|------|
| | | | | Pass | Fail | N/A | |
| 10 sec | +/- 10% | 9.72 | Sec | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 60 sec | +/- 10% | 61.2 | Sec | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 250 sec | +/- 10% | 255.1 | Sec | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

Note : Under Room Temperature: 26°C / DOS Mode

7. O.S. Compatibility Test

7.1. English Fedora core15 kernel 2.6.38.6-26.rc1.fc15.i686.PAE

[] No Support

Driver Information:

| | |
|------------------|----------------|
| Chipset Software | System default |
| Graphics Media | System default |
| Audio Driver | System default |
| LAN Driver | System default |

Install OS to SATA HDD:

| Installation | Result | | | Note |
|--|-------------------------------------|--------------------------|--------------------------|---------------|
| | Pass | Fail | N/A | |
| Fedora core15 kernel 2.6.38.6-26.rc1.fc15.i686.PAE | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Type uname -a |

Test Result:

| Test Item | Result | | | Note |
|--|-------------------------------------|--------------------------|--------------------------|---------------------------|
| | Pass | Fail | N/A | |
| Display Function Test | | | | |
| VGA – Full Screen | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Network Function Test | | | | |
| Connect to Internet – LAN 1 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Connect to Internet – LAN 2 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Audio Function Test | | | | |
| Play Audio Function Test | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Play Audio Test |
| Base Function Test | | | | |
| Mouse Test | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Keyboard Test | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| USB 2.0 Removable Devices | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| X Windows Application | | | | |
| Start Button Office | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Office function |
| X-Window | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Startx – Desktop in Linux |
| Command Test On Text Mode: Attention Delay Phenomenon | | | | |
| uname -a | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Show information |
| Shutdown | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Init 0 or shutdown -h now |
| Restart the Computer | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Init 6 or shutdown -r now |
| Halt | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Power Off Mode |
| ls / clear; cd /dev /ls -l | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Command instruction |

7.2. Windows 7 Ultimate English Version 32/64Bit

{ } No Support

{ X } x32 Driver Information:

| | |
|------------------|--|
| Chipset Software | Intel Chipset Device Software 9.2.2.1034 (7/20/2011) |
| Graphics Media | Intel Graphics Media Accelerator 3600 Series 8.14.8.1077(03/06/2012) |
| Audio Driver | VIA High Definition Audio 6.0.1.8700(8/4/2010) |
| LAN Driver | Realtek PCIe GBE Family Controller 7.48.823.2011 (8/23/2011) |
| | Realtek PCIe GBE Family Controller 7.48.823.2011 (8/23/2011) |

{ X } No Support

{ } x64 Driver Information:

| | |
|------------------|--|
| Chipset Software | |
| Graphics Media | |
| Audio Driver | |
| LAN Driver | |

Install OS to SATA HDD:

| Installation | Result | | | Note |
|--------------------------------------|-------------------------------------|--------------------------|--------------------------|------|
| | Pass | Fail | N/A | |
| English Windows 7 Ultimate ACPI Mode | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

Test Results:

| Test Item | Result | | | Note |
|--|-------------------------------------|--------------------------|-------------------------------------|------|
| | Pass | Fail | N/A | |
| Single Display | | | | |
| VGA – Full Screen | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| DVI – Full Screen | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| LVDS – Full Screen | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Boot – Windows 7 Ultimate Advanced Options Menu | | | | |
| Safe Mode | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Basic Function Test | | | | |
| PS/2 Mouse and Keyboard | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| USB Mouse and Keyboard | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| COM Port Mouse detect | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| LPT1 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| USB 2.0 Removable Devices | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| LAN Function Test | | | | |
| LAN1 --- Auto | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| LAN2 --- Auto | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Audio Function Test | | | | |
| Line Out Test | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Line In Test | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Microphone Test | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| S/P DIF Test | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Start Menu | | | | |
| Log off User | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Shut down (S5) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Standby (S3) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Restart | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Hibernate (S4) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

7.3. Windows XP SP3 English Version 32/64Bit

{ X } No Support

{ } x32 Driver Information:

| | |
|------------------|--|
| Chipset Software | |
| Graphics Media | |
| Audio Driver | |
| LAN Driver | |

{ } x64 Driver Information:

| | |
|------------------|--|
| Chipset Software | |
| Graphics Media | |
| Audio Driver | |
| LAN Driver | |

Install OS to SATA HDD:

| Installation | Result | | | Note |
|----------------------------------|--------------------------|--------------------------|--------------------------|------|
| | Pass | Fail | N/A | |
| English Windows XP SP3 ACPI Mode | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

Test Results:

| Test Item | Result | | | Note |
|---|--------------------------|--------------------------|--------------------------|------|
| | Pass | Fail | N/A | |
| Single Display | | | | |
| VGA – Full Screen | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| DVI – Full Screen | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| LVDS – Full Screen | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Boot – Windows XP Ultimate Advanced Options Menu | | | | |
| Safe Mode | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Basic Function Test | | | | |
| PS/2 Mouse and Keyboard | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| USB Mouse and Keyboard | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| COM Port Mouse detect | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| LPT1 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| USB 2.0 Removable Devices | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| LAN Function Test | | | | |
| LAN1 --- Auto | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| LAN2 --- Auto | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Audio Function Test | | | | |
| Line Out Test | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Line In Test | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Microphone Test | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| S/P DIF Test | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Start Menu | | | | |
| Log off User | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Shut down (S5) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Standby | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Restart | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Hibernate (S4) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

8. BIOS Function Test

| Hardware Information with Windows 7 Ultimate English Version 32 Bit Driver Version | |
|--|---|
| CPU | Intel® Atom™ Processor D2550 (1M Cache, 1.86 GHz) |
| Memory | Transcend DDR3-1066 2GB- Hynix H5TQ2G83BFR |
| SATA HDD | FUJITSU 2.5" SATA 80GB-MHZ2080BH G2 |

8.1. Advanced Test

| Test Item | Result | | | Note |
|-------------------------|-------------------------------------|-------------------------------------|--------------------------|-------------------------------|
| | Pass | Fail | N/A | |
| Show Turn off String | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | System Fan will not stop. |
| Hyper-threading | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Enable/Disable |
| Intel IGD Configuration | IGFX-Boot type | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | LCD panel type | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | Backlight Brightness Setting | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Serial ATA Controller | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Enable/Disable |
| SATA Mode | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | IDE/AHCI |
| Legacy USB Support | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| SIO GPIO | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Watch Dog | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 0~250sec |
| HD Audio Controller | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Front Panel Type | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Serial Port1 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Serial Port2 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| RS422/485 Support | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Serial Port3 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Serial Port4 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Serial Port5 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Parallel Port | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Restore AC Power Loss | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Power on/Power Off/Last State |
| Power On By PCIE | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Enable/Disable |
| Power On By Ring | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Enable/Disable |
| Power On By RTC | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Enable/Disable |

8.2. Monitor Test

| Test Item | Result | | | Note |
|--------------------|----------------|-------------------------------------|--------------------------|--------------------------|
| | Pass | Fail | N/A | |
| Smart Fan Function | Full mode | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | Automatic Mode | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | Manual Mode | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

8.3. Boot Test

| Test Item | Result | | | Note |
|------------------------|-------------------------------------|--------------------------|--------------------------|------|
| | Pass | Fail | N/A | |
| Boot up Num lock State | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Full Screen Logo | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Option ROM Messages | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Boot From Hard Disk | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Boot From CDROM | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Boot From USB HDD | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Boot From USB Floppy | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

| | | | | |
|----------------------|-------------------------------------|--------------------------|--------------------------|--|
| Boot From USB CD-ROM | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Boot from LAN | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Disable | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

8.4. CMOS Backup / Clear CMOS Test

| Test Item | Result | | | Note |
|-----------------|-------------------------------------|--------------------------|--------------------------|------|
| | Pass | Fail | N/A | |
| CMOS Backup | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Clear CMOS Test | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

8.5. AAEON Tag Check Utility

| Test Item | Result | | | Note |
|---------------------|-------------------------------------|--------------------------|--------------------------|--------------|
| | Pass | Fail | N/A | |
| Check AAEON BIOS OK | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | AONCHECK.EXE |

8.6. Supervisor / User Password Test

| Test Item | Result | | | Note |
|---------------------|-------------------------------------|--------------------------|--------------------------|------|
| | Pass | Fail | N/A | |
| Supervisor Password | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| User Password | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

9. Performance Test

| Hardware Information with Windows 7 Ultimate English Version 32 Bit Driver Version | |
|--|---|
| CPU | Intel® Atom™ Processor D2550 (1M Cache, 1.86 GHz) |
| Memory | Transcend DDR3 1066 SODIMM CL7 2GB-Hynix H5TQ2G83BFR H9C 105VA x2 |
| SATA HDD | Seagate ST500DM002 500GB/7200rpm 3.5" |

9-1. Performance Test

Test Result: (Display set 1024*768 test)

| Testing Software | Scope | | Note |
|--------------------|-------|------|--------------------|
| | AAEON | Ref. | |
| PCMark2002 | | | Only for Windows 7 |
| CPU | N/A | - | |
| Memory | 7726 | - | |
| HDD | 3767 | - | |
| Benchmark (A) | - | | |
| PCMark2005 | | | Windows 7 |
| PCMark | 2365 | - | PCMarks |
| CPU | 2216 | - | |
| Memory | 3078 | - | |
| Graphics | 762 | - | |
| HDD | 7849 | - | |
| Benchmark (B) | - | | |
| Average Efficiency | - | | |

| Testing Software | Scope | | Note |
|------------------------|-------|------|--------------------|
| | AAEON | Ref. | |
| 3Dmark2003 v360 | | | Only for Windows 7 |
| 3Dmark Score | 2604 | - | |
| CPU Score | 324 | - | |
| Benchmark (A) | - | | |
| 3Dmark2006 v120 | | | Windows 7 |
| 3Dmark Score | 562 | - | |
| SM2.0 Score | 221 | - | |
| HDR/SM3.0 Score | 175 | - | |
| CPU Score | 976 | - | |
| Benchmark (B) | - | | |
| Average Efficiency | - | | |

| Testing Software | Scope | | Note |
|---|-------|------|---------------|
| | AAEON | Ref. | |
| Final Reality V1.01—BenchMark Test | | | Windows 7 |
| 2D image | 24.08 | - | |
| 3D | 3.42 | - | |
| Bus transfer | 8.56 | - | |
| Overall | 10.39 | - | Reality marks |
| Benchmark (A) | - | | |

| Testing Software | Scope | | Note |
|---------------------|-------|------|------------------|
| | AAEON | Ref. | |
| Performance7 | | | Windows 7 |
| PassMark Rating | 303.0 | - | |
| CPU Mark | 729.6 | - | |
| 2D Graphics Mark | 53.4 | - | |
| 3D Graphics Mark | 102.2 | - | |
| Memory Mark | 311.9 | - | |
| Disk Mark | 950.2 | - | |

| Testing Software | Scope | | Note |
|---------------------------------|-------|------|------------------|
| | AAEON | Ref. | |
| Windows experience index | | | Windows 7 |
| Processor | 3.6 | - | |
| Memory | 5.1 | - | |
| Graphics | 5.9 | - | |
| Gaming graphics | 3.3 | - | |
| Primary hard disk | 5.9 | - | |