

# AQ7-LN

## Intel Atom Pineview-M + ICH8M

### P5 Verification Test Report

Summary	<input checked="" type="checkbox"/> <b>Pass</b>			
	<input type="checkbox"/> <b>Fail</b>			
<input type="checkbox"/> <b>Pass with Deviation</b>				
<b>Comment:</b> _____				
<b>Test Result Summary</b>				
	Critical	Major	Minor	Enhancement
Defect Found	0	0	0	0
Defect Unsolved	0	0	0	0

Issue date	Approval	Test Engineer
_____	_____	_____
2011/3/22	Jansin Lee	Mike Lee

## Test Suites Overall Results Summary

No.	Test Category	Test Results
1	Hardware Compatibility Test	PASS
2	Basic Function Test	PASS
3	Integration Test	PASS
4	Application Test	PASS
5	Power Consumption Test	PASS
6	Time Accuracy Test	PASS
7	O.S. Compatibility Test	PASS
8	BIOS Test	PASS
9	Performance Test	PASS

## Platform Information

Item	Device Information	Test Item
PCB Model / Version	AQ7-LN	1,2,3,4,5,6,7,8,9
CPU Board	AQ7-LN Rev A0.3	1,2,3,4,5,6,7,8,9
Carrier Board	ECB-930G Rev A0.3	1,2,3,4,5,6,7,8,9
BIOS / Version	AQ7LN 0.43 x64 08/31/2010	1,2,3,4,5,6,7,8,9
CPU Type	Onboard Intel Atom N450 Pineview-N N450 @ 1.66GHz Onboard Intel Atom D510 Pineview-N N450 @ 1.66GHz	1,2,3,4,5,6,7,8,9
Memory Type	Onboard DDR2 Memory 667 1GB - Chip SEC 931.HCF7 K4T1G084QE	1,2,3,4,5,6,7,8,9
SATA HDD	Seagate 2.5" SATA2 HDD 120GB 7200RPM-ST9120823AS	1,2,3,4,5,6,7,8,9
SSD HDD	SST NANDriver 85LD1004T 60-R1-LCTE 0940088-AA0	1,2,3,4,5,6,7,8,9
SATA DVD-ROM	PIONEER SATA DVD-ROM DVR-217	1,2,3,4,5,6,7,8,9
USB DVD-ROM	LITEON RW DVD-ROM DX-20A4PU	1,2,3,4,5,6,7,8,9
LCD Monitor	HANNS.G LCD Monitor HK191H - HSG1049 -1440*900	1,2,3,4,5,6,7,8,9
LVDS	AU G065VN01 V.0 / 6.5" / 640x480 / 18bit (4:3) AU G084SN05 V.3 / 8.4" / 800*600 / 18bit (4:3) Data Image 7" / 800*480 / 18bit (16:9) AU G150XG01 V.0 / 15" / 1024*768 / 18bit (4:3) Toshiba /12.1"/1280 x 768 x 18bit (16:9)	1,2,3,4,5,6,7,8,9
Compact Flash	Transcend 2G / 4G / 8G	1,2,3,4,5,6,7,8,9
Daughter Board	N/A	N/A
Expansion Board	N/A	N/A
Operating System	[ ] Linux-RedHat 9.0 [ X ] Fedora Core 11 kernel 2.6.29 [ X ] Windows 7 Ultimate 32Bit [ X ] Windows XP Professional English SP3 32 Bit	7-1 7-2 7-3
Power Supply	ATX Power Supply : N/A AT Power Supply:N/A DC Adapter : FSP GROUP INC. - FSP065-A AC AC Input:100-240V~1.5A,50-60Hz DC Output:19V ~ 3.42A	N/A N/A 1,2,3,4,5,6,7,8,9
Battery Model	LI-LON RECHARGEABLE BATTERY PACK - PC3200 DC:11.1V	1,2,3,4,5,6,7,8,9
	<b>Chipset Information with XP Professional English SP3 32 Bit Driver Version</b>	
Chipset Software	Intel Chipset Device Software - 9.1.1.1009 - 03/09/2009	
North Bridge	Intel Atom Host Bridge	
South Bridge	Intel ICH8M	

<b>Super IO Chipset</b>	Winbond W83627DHG-P(On ECB-930G)
<b>GPU Chipset</b>	Intel Graphics Media Accelerator 3150
<b>Audio Chipset</b>	Realtek ALC888 (On ECB-930G)
<b>Ethernet Chipset</b>	Intel 82567V Ethernet (On AQ7-LN) & Intel 82574L Ethernet(On ECB-930G)

## Summary Table of contents:

AQ7-LN.....	1
Intel Atom Pineview-M + ICH8M .....	1
Test Suites Overall Results Summary .....	2
Platform Information.....	2
Version Released Records.....	5
1. Hardware Test .....	6
2. Basic Function Test.....	8
3. Integration Test .....	12
4. Application Test.....	13
4.1. PCI Slot Function (PCI Adapter Card) Test.....	13
4.2. PCI-Express Function Test .....	13
4.3. Mini PCI Card Compatibility Test.....	14
4.4. CardBus (PCMCIA) Compatibility Function Test.....	14
4.5. ISA Slot Function Test.....	14
4.6. Adapter Compatibility- Industry Control Card PC/104, PC/104+, PCI-104 Modules.....	14
4.7. SSD Modules Compatibility Test.....	15
4.8. Peripheral Compatibility- Storage Device Test.....	15
4.9. Riser Card Function Test.....	15
5. Power Consumption Test .....	16
5.1. Power Consumption Test.....	16
5.2. PC Health Status.....	16
6. Time Accuracy Test.....	17
6.1. System Clock & RTC Clock Test .....	17
6.2. Watchdog Timer Test .....	17
7. O.S. Compatibility Test .....	18
7.1. English Fedora Core 11 –kernel 2.6.29 .....	18
7.2. Windows 7 Ultimate English Version 32/64Bit.....	19
7-3. Windows XP Professional English Version 32Bit .....	21
8. BIOS Function Test.....	23
8.1. Boot Sequence Test.....	23
8.2. Power Management Test .....	23
8.2.1. APM Power Management Test .....	23
8.2.2. ACPI Power Management Test .....	23
8.3. Power On after Power Failure Test .....	23
8.4. CMOS Backup / Clear CMOS Test.....	23
8.4.1 After Clear CMOS , Display will show " CMOS Checksum Error".....	23
8.5. AAEON Tag Check Utility .....	24
8.6. TPM Function Test .....	24
8.7. IAMT Function Test .....	24
8.8. CAN port Function Test .....	24
8.9. Supervisor / User Password Test.....	24
8-10. Backlight Controller .....	24
9. Performance Test.....	25

There are 3 test results in this document; they are described as follows:

**Pass:** Function worked perfectly

**Fail:** Function failed and must be modified in the next version

**N/A:** Outside of specifications or no test equipment

The test report would be tested and updated after version changed.

● Version Released Records

Date	Version	Item	Note
2010/04/21	P3-1001	1. 調整文字表格前後對齊 2. Modify 新版首頁	
2010/06/01	P2P3-1001	1. New Test Report	
2010/06/21	P2P3-1002	1. Add BIOS -> SPI ROM Setting (South Bridge – GPIO)	
2010/09/02	P2P2-1003	1. Modify All Test Items	

# 1. Hardware Test

## 1.1. CPU Compatibility Test

CPU Information	Result			Note
	Pass	Fail	N/A	
Onboard Intel Atom Pineview-N N450 @ 1.66GHz	X			
Onboard Intel Atom D510 Pineview-N D510 @ 1.66GHz	X			

## 1.2. Memory Compatibility Test

Memory Information	MEM V4.10			Note
	Pass	Fail	N/A	
Onboard DDR2 Memory 667 1GB	X			

## 1.3. SATA Compatibility Test

### 1.3.1 Onboard SATA (IDE) Test

SATA Device Information	Result			Note
	Pass	Fail	N/A	
Seagate 2.5" SATA2 HDD 120GB 7200RPM-ST9120823AS	X			
PIONEER SATA DVD-ROM DVR-217	X			

### 1.3.2 Onboard SATA (RAID) Test [ X ] No Support

SATA RAID Test		Result			Note
		Pass	Fail	N/A	
RAID-0 (HDDx2) Striping/Span Test	1				
	2				
RAID-1 (HDDx2) Mirror Test	1				
	2				
RAID-5 (HDDx3) Striping/Span Test Rotation Parity	1				
	2				
	3				
RAID-10 (HDDx3) Striping/Span Test Mirroring	1				
	2				
	3				
	4				

### 1.3.3 Onboard SATA (AHCI) Test [ X ] No Support

SATA AHCI Test	Result			Note
	Pass	Fail	N/A	
				Slot at 1/2/3/4/OS

### 1.4. Compact Flash Compatibility Test

Compact Flash Information	Result			Note
	Pass	Fail	N/A	
Transcend 2G / 4G / 8G	X			Data Transfer (Read/Write)

### 1.5. LVDS Compatibility Test

LVDS Model	Result			Note
	Pass	Fail	N/A	
1_AUO G065VN01 V.0 / 6.5" / 640x480 / 18bit (4:3)	X			
2_AUO G065VN01 V.0 / 6.5" / 640x480 / 24bit (4:3)			X	
3_Data Image 7" / 800*480 / 18bit (16:9)	X			
4_AU G084SN05 V.3 / 8.4" / 800*600 / 18bit (4:3)	X			
5_AU B104SN02 V.0 / 10.4" / 800*600 / 18bit (4:3)	X			
6_AUO G084SN05 v7 / 8.4" / 800*600 / 24bit (4:3)			X	
7_AU G150XG01 V.0 / 15" / 1024*768 / 18bit (4:3)			X	
8_AU M150XN07 V.2 / 15" / 1024x768 / 24bit (4:3)			X	
9_Toshiba /12.1"/1280 x 768 x 18bit (16:9)	X			
10_AU M170EG01 V.D/ 17" / 1280*1024 / 48bit (4:3)			X	
11_AU M170XW01 V.1 / 17" / 1280x768 / 24bit (16:9)			X	
12_AUO T260XW02 / 26" / 1366x768 / 24bit			X	
13_AU M201UN02 V.5 / 20.1" / 1600x1200x48bit			X	
14_AUO T370HW01 / 37" / 1920x1080 / 48bit			X	
15_AUO M190PW01 V0 / 19"/1440X900/48 bit			X	

## 2. Basic Function Test

### 2.1. Video Function Test

#### 2.1.1. Single Output Function Test

Interface	Model Name									
VGA	HANNS.G LCD Monitor HK191H - HSG1049 -1440*900									
DVI	N/A									
TV	N/A									
LVDS	Toshiba /12.1"/1280 x 768 x 18bit (16:9)									
Color Quality	[ X ] 16bit [ ] 24bit [ X ] 32bit									
Resolution	VGA			DVI			LVDS			Note
	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	
640X480	X					X	X			
800X600	X					X	X			
1024X768	X					X	X			
1152X864			X			X			X	
1280X600			X			X			X	
1280X720			X			X			X	
1280X768	X					X	X			
1280X960			X			X			X	
1280X1024			X			X			X	
1400X1050			X			X			X	
1600X900			X			X			X	
1600X1200	X					X			X	
1600X1050			X			X			X	
1792X1344			X			X			X	
1856X1392			X			X			X	
1920X1080			X			X			X	
1920X1200			X			X			X	
1920X1440			X			X			X	
2048X1536			X			X			X	
Rotation	X					X	X			Rotation ( 0 / 90 /180 /270)

Note: Pay attention with 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			X	
Dual Display Twin				X	
Extended Desktop				X	
Dual Display Clone	VGA + LVDS	X			
Dual Display Twin				X	
Extended Desktop		X			



### 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 system reaches Windows then check VGA driver and display
3. Check VGA output Brightness is normal and it shows "Ghost Image" / "Flicker" or not

	Result			Note
	Pass	Fail	N/A	
In Windows Desktop	X			







### 2.2. Audio Function Test

[ ] No Support

Function Test	Result			Note
	Pass	Fail	N/A	
L (Left) Channel	X			
R (Right) Channel	X			
CD_In	X			
Line In	X			
MICROPHONE	X			
6-channel mode for 5.1 speaker output			X	
8-channel mode for 7.1 speaker output			X	
S/P DIF function Test	Input		X	
	Output		X	

### 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		HP J4095A 24 Ports							
10MBps LAN HUB		SVEC FD916H							
OnBoard LAN1		Intel 82567V Ethernet							
OnBoard LAN2		Intel 82574L Ethernet							
LAN Speed	Link / Active LED	Speed LED	LAN 1			LAN 2			Note
			Pass	Fail	N/A	Pass	Fail	N/A	
1000Mbps			X			X			
100MBps			X			X			
10MBps			X			X			
Wake On LAN			X			X			
Boot ROM to Novell 4.11 [RPL]					X			X	
LAN Boot (PXE)			X			X			
Internet Browser (DHCP Server)			X			X			

### 2.3.2. SmartBits Test

#### DUT Platform Information:

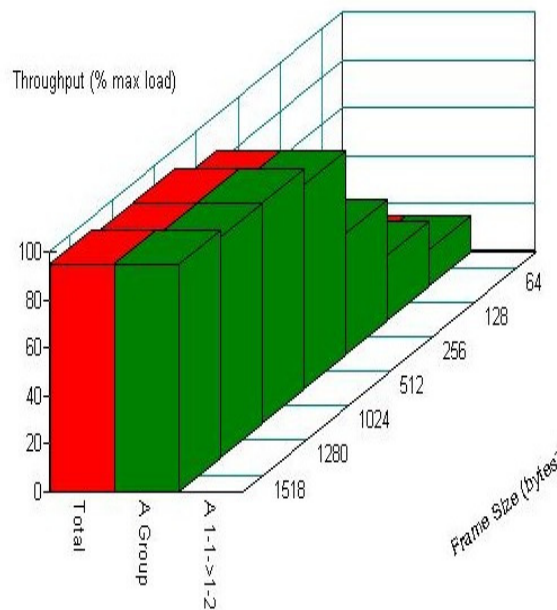
Graphics Media	Cent OS 5.5 - Red hat version 5.1.19.6 Default setting
LAN	LAN1 → Intel 82567V Ethernet: Fedora Core Default setting
	LAN2 → Intel 82574L Ethernet: Fedora Core Default setting
Audio Driver	Cent OS 5.5 - Red hat version 5.1.19.6 Default setting

#### SMB Platform Information:

Chassis	<b>SPIRENT Smartbits 600B</b>
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:

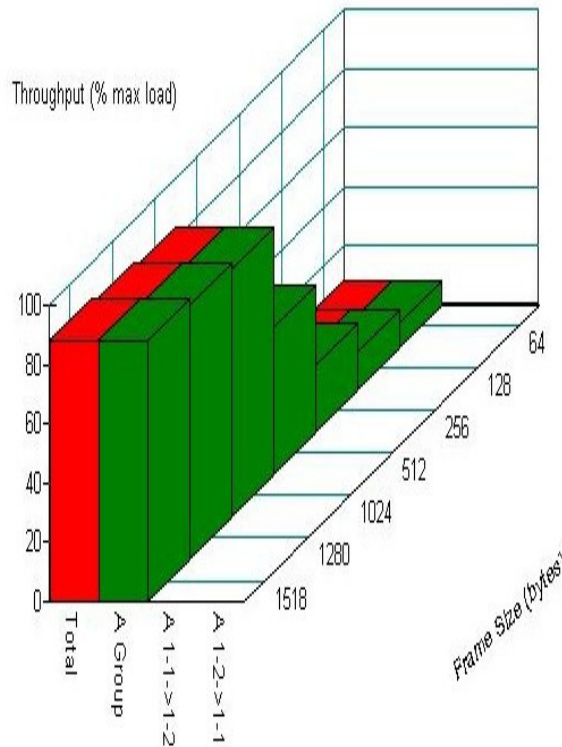
Half Direction (LAN1: Intel 82567V 10/100/1G Ethernet → LAN2: Intel 82574L 10/100/1G Ethernet)



Throughput vs Frame Size

Name/Frame size	64	128	256	512	1024	1280	1518
Total	14.921875	26.5234375	49.7265625	84.53125	91.4921875	91.4921875	94.5859375
A Group	14.921875	26.5234375	49.7265625	84.53125	91.4921875	91.4921875	94.5859375
A 1-1->1-2	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Binary Direction (LAN1: Intel 82567V 10/100/1G Ethernet → LAN2: Intel 82574L 10/100/1G Ethernet)



Throughput vs Frame Size

Name/Frame size	64	128	256	512	1024	1280	1518
Total	7.9609375	12.6015625	21.8828125	48.953125	82.984375	85.3046875	87.625
A Group	7.9609375	12.6015625	21.8828125	48.953125	82.984375	85.3046875	87.625
A 1-1->1-2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A 1-2->1-1	N/A	N/A	N/A	N/A	N/A	N/A	N/A

## 2.4. Others Function Test

[ X ] No Support

Function Test	Result			Note
	Pass	Fail	N/A	
3G Module				
GPRS				
Wireless LAN				
Bluetooth				

### 3. Integration Test

#### 3.1. USB Port Integration Test

Item	USB Port	Boot			Function(XP)			Note
		Pass	Fail	N/A	Pass	Fail	N/A	
USB HDD		X			X			
USB FDD Mitsumi D353GUE		X			X			
SONY USB2.0 DVD-R/W DRX-830UL		X			X			
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					X			

#### 3.2. Digital I/O Port Test

DIO Address ( ____ )	Result			Notes
	Pass	Fail	N/A	
DIO VCC +5V	X			

#### 3.3. COM Port Integration Test

Test Item	Result			Notes
	Pass	Fail	N/A	
Serial Modem Dial Out	X			
Serial Modem	Ring In	X		Test by Modem
	+12V	X		Test by Multimeter
	+5V	X		Test by Multimeter
BurnIn Test V5.3 Pro	X			

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

Test Item	Result			Notes
	Pass	Fail	N/A	
RS-422 for COM2	X			Use loopback and WINSSD.exe to test RS-422 in Windows
RS-485 for COM2	X			Use ICP CON I-7044D D/IO Module in Windows(Support Auto flow control)
	X			The communication between the RS-485 pots of two boards is linked by one 100m cable on Windows Terminal

#### 3.5. LPT Port Test

Test Item	Result			Notes
	Pass	Fail	N/A	
XEROX Phaser 3124 Laser Printer			X	

## 4. Application Test

### 4.1. PCI Slot Function (PCI Adapter Card) Test [ X ] No Support

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

### 4.2. PCI-Express Function Test

PCI-Express x1	Function Test			Note
	Pass	Fail	N/A	
SUNIX SATA1414 eSATA & SATAII x1Express card			X	
Syskonnect SK-9E21D 10 /100/1000 Base-T Adapter PCI-Express x1 LAN Card			X	
PCI-Express x4	Function Test			Note
	Pass	Fail	N/A	
Adaptec AAR-1430SA SATAII HostRAID Controllers			X	
PCI-Express x16	Function Test			Note
	Pass	Fail	N/A	
ASUS EAX1600PRO/TD/256M/A (ATI Chipset) PCI-Express x16 VGA Card			X	
WINFAST PX6200 TC TDH PCI-Express x16 VGA Card			X	
Express card	Function Test			Note
	Pass	Fail	N/A	
SUNIX SATA II Express card			X	
SunBox 34mm Giga LAN Express Card			X	
Mini PCI Express Card	Function Test			Note
	Pass	Fail	N/A	
Ralink RT2571WF WLAN Mini Card (USB Interface)	X			
Sil3132 Mini PCI-E Function Test Card (USB Interface)	X			
Sierra 3G wireless Mini Card	X			

#### 4.3. Mini PCI Card Compatibility Test [ X ] No Support

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

#### 4.4. CardBus (PCMCIA) Compatibility Function Test [ X ] No Support

Device Item	Bit	Function Test			Note
		Pass	Fail	N/A	
Intel PRO/Wireless 2011B LAN PC Card (WPC2011BWW)	Slot 1 (Up)				[PC-200200]
	Slot 2 (Down)				
Kingston datapack DP-PCM2 / 2GB (PC Card Typell HDD)	Slot 1 (Up)				[PC-200201]
	Slot 2 (Down)				
PCi GW-NS54SG Cardbus Adapter Wireless LAN Type-II	Slot 1 (Up)				[PC-200502]
	Slot 2 (Down)				
PCi GW-NS54SG Cardbus Adapter Wireless LAN Type-II	Slot 2 (Down)				[PC-200502]

#### 4.5. ISA Slot Function Test [ X ] No Support

Test Item	Result			Note
	Pass	Fail	N/A	
SCSI Card Adaptec AHA-1520B SCSI Card				[SS-002]
LAN Card NE2000 Compatible LAN Card (RTL8019AS)				[NW-014]
VGA Card CIRRUS LOGIC 5429 FCC ID:ICUVGA-GWV27A				[VC-008]

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

##### 4.6.1. Device List: PC/104 Module [ X ] No Support

Test Item	Result			Notes
	Pass	Fail	N/A	
AAEON PCM-3660				

##### 4.6.2. Device List: PC/104+ Module [ X ] No Support

Test Item	Result			Notes
	Pass	Fail	N/A	
AAEON PCM-3430				

4.6.3. Device List: PCI-104 Module  No Support

Test Item	Result			Notes
	Pass	Fail	N/A	
AAEON PCM-3730				

4.6.4. Device List: PCI/104 Express Module  No Support

Test Item	Result			Notes
	Pass	Fail	N/A	
AAEON PER-123				

4.7. SSD Modules Compatibility Test

SSD HDD Compatibility Test:

Cable Type:  IDE  SATA2  MLC  SLC

Test Item	Result			Notes
	Pass	Fail	N/A	
Transcend SSD 16G - TS16GSSD25S	X			
Onboard SSD 4GB	X			

4.8. Peripheral Compatibility- Storage Device Test

4.8.1. Disk on Chip (DOC) Test  No Support

Test Item		Result			Notes
		Pass	Fail	N/A	
DOC 2000 Model	16MB				M-System / MD2200-D16
DOC 2000 Onboard Address	CC00				
	D000				
	D400				
	D800				
	DC00				
	Disable				

4.8.2. Disk on module (DOM) Test  No Support

Test Item	Result			Notes
	Pass	Fail	N/A	
Transcend / TS512MDOM40V / 512MB / IDE 40 Pin				
Transcend / TS512MDOM44V / 512MB / IDE 44 Pin				

4.9. Riser Card Function Test  No Support

Test Item	Result			Note
	Pass	Fail	N/A	
LAN				
PCI Slot				
PCI-e Slot				

## 5. Power Consumption Test

### 5.1. Power Consumption Test

Test Environment	DC Power(8.5V~19V)	Note
Model		
Normal Mode (+8.50V)	2.43	A Prime 95 in XP
Suspend Mode (+8.50V)	1.56	A Suspend in XP (S1)
Power On Mode(+8.50V)	2.36	A Max rush current during boot to Windows
Normal Mode (+12V)	1.63	A
Suspend Mode (+12V)	1.15	A
PowerOn Mode (+12V)	1.46	A
Normal Mode (+16V)	1.20	A
Suspend Mode (+16V)	0.82	A
Power On Mode(+16V)	1.13	A
Normal Mode (+19V)	1.09	A
Suspend Mode (+19V)	0.73	A
Power On Mode(+19V)	0.99	A

### 5.2. PC Health Status

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

Voltage Monitoring Test	Result			In Bios(V)	Actual (V)	Note
	Pass	Fail	N/A			
VCORE	X			+1.024	+1.03	
+ DDR	X			+1.816	+1.81	
+ 5V	X			+4.992	4.96	
+ 3.3V	X			+3.232	3.24	
System Fan1 Speed	X			8132 RPM		
System Fan2 Speed			X	RPM		
CPU Temp			X	+73°C	N/A	On CPU Die
SB Temp	X			+54°C	+50°C	
System Temp	X			+46°C	+42°C	



## 6. Time Accuracy Test

### 6.1. System Clock & RTC Clock Test

Under Room Temperature: 25 °C

Item Function	Time Interval	Margin for error	Actual	Result			Note
				Pass	Fail	N/A	
RTC Clock in Power On Mode	24 hrs	+/-3 sec	-1 Sec	X			
RTC Clock in Power Off Mode	24 hrs	+/-3 sec	+3 Sec	X			

### 6.2. Watchdog Timer Test

Use Function as below: aaeonwdt

[ ] No Support.

Time-out interval	Margin for error	Actual	Result			Note
			Pass	Fail	N/A	
10 sec	+/- 20%	11.2 Sec	X			Software provided by Aaeon S/W
60 sec	+/- 20%	68.1 Sec	X			

Note : Under Room Temperature: 25°C / DOS Mode

## 7. O.S. Compatibility Test

### 7.1. English Fedora Core 11 –kernel 2.6.29

[ ] No Support

Driver Information:

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

Install OS to [ ] IDE [ X ] SATA HDD:

Installation	Result			Note
	Pass	Fail	N/A	
Linux localhost.localdomain 2.6.18-194.el5xen	X			Type uname -a

Test Result:

Test Item	Result			Note
	Pass	Fail	N/A	
<b>Install From IDE CD-ROM</b>				
Install to HDD	X			
<b>Base Function Test</b>				
VGA Test	X			
Soundcard Test	X			
LAN Test	X			
Mouse Test	X			
Keyboard Test	X			
CD-ROM Test	X			
USB Floppy Test	X			
USB CD-ROM Test	X			
USB HDD Test	X			
<b>Display Function Test</b>				
CRT -- Full Screen	X			
LCD -- Full Screen			X	
DVI -- Full Screen			X	
DVI + LCD			X	
CRT + LCD			X	
CRT + DVI			X	
<b>Network Function Test</b>				
Connect to Internet	X			
Ping IP Address	X			Ping
<b>Audio Function Test</b>				
Play Audio Function Test	X			Play Audio Test
<b>X Windows Application</b>				
Start Button Office	X			Office function
X-Window	X			Startx – Desktop in Linux
<b>Command Test On Text Mode: Attention Delay Phenomenon.</b>				
uname -a	X			Show information
Log Out	X			
Shutdown	X			Init 0 or shutdown -h now
Restart the Computer	X			Init 6 or shutdown -r now
Halt	X			Power Off Mode
ls / clear .....; cd /dev /ls -l	X			Command instruction

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

No Support

x32 Driver Information:

Chipset Software	Intel Chipset Device software – 9.1.1.1009 – 03/29/2009
Graphics Media	Intel Grpahics Media Accelerator 3150 – 8.14.10.2117 – 04/19/2010
LAN Driver	Intel 82567V-3 Gigabit Network Connection – 10.1.6.0 – 10/20/2009 Intel 82574L Gigabit Network Connection – 10.1.6.0 – 10/20/2009
Audio Driver	Realtek High Definition Audio – 6.1.7600.16385 – 07/13/2009

No Support

x64 Driver Information:

Chipset Software	
Graphics Media	
LAN Driver	
Audio Driver	

Install OS to  IDE  SATA HDD:

Installation	Result			Note
	Pass	Fail	N/A	
English Windows 7 Ultimate ACPI Mode	X			

## Display Function Test:

	Check VGA driver			Check Display			
	Pass	Fail	N/A	Pass	Fail	N/A	
In Windows Desktop	X			X			

## Test Results:

Test Item	Result			Note
	Pass	Fail	N/A	
<b>Install From USB CD-ROM</b>				
Install to HDD	X			
<b>Boot - Windows 7 Ultimate Advanced Options Menu</b>				
Safe Mode	X			
Reboot	X			
Return to OS Choices Menu	X			
<b>Basic Function Test</b>				
SATA Port0	X			
SATA Port1			X	
SATA Port2	X			
SATA Port3			X	
PS/2 Mouse and Keyboard	X			
USB Mouse and Keyboard	X			
COM Port Mouse detect	X			
<b>LAN Function Test</b>				
LAN1 --- Auto	X			
LAN2 --- Auto	X			
<b>Audio Function Test</b>				
Audio 2.1 Channel Test	X			
S/P DIF Test			X	
Play Audio Function Test	X			

Start Menu				
Log off User	X			
Shut down	X			
Standby	X			
Restart	X			
Hibernate	X			

### 7-3. Windows XP Professional English Version 32Bit

x32 Driver Information:

Chipset Software	Intel Chipset Device Software – 9.1.1.1009 – 03/09/2009
Graphics Media	Intel Graphics Media Accelerator 3150 – 6.14.10.5182 – 11/11/2009
LAN Driver	Intel 82567V-3 Gigabit Network Connection – 10.1.6.0 – 10/20/2009 Intel 82574L Gigabit Network Connection – 10.1.6.0 – 10/20/2009
Audio Driver	Realtek High Definition Audio – 5.10.0.5928 – 08/31/2009

Install OS to  IDE  SATA HDD  SSD:

Installation	Result			Note
	Pass	Fail	N/A	
English Windows XP Professional Service Pack 3 V2002 ACPI Mode	X			
English Windows XP Professional Service Pack 3 V2002 APM Mode			X	

#### VGA Resolution Test

Color :  16bit  32bit

Resolution	CRT			TTL			LVDS			Note
	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	
640X480	X					X	X			
800X600	X					X	X			
1024X768	X					X	X			
1280X768	X					X	X			
1600X1200	X					X			X	

LCD Model Name: HANNS.G LCD Monitor HK191H - HSG1049 1440\*900

TTL Panel: N/A

LVDS Panel: 640\*480 / 800\*600 / 1024\*768 / 1280\*768

#### Display Function Test:

	Check VGA driver			Check Display			
	Pass	Fail	N/A	Pass	Fail	N/A	
In Windows Desktop	X			X			

#### Test Results:

Test Item	Result			Note
	Pass	Fail	N/A	
Install From USB CD-ROM				
Install to HDD	X			
Display Function Test				
CRT -- Full Screen	X			
LCD -- Full Screen	X			
DVI --- Full Screen				X
TV ---- Full Screen				X
DVI + LCD				X
CRT + LCD	X			
CRT + DVI				X
CRT + TV				X
CRT + LCD + TV				X
External VGA Card Test (Dual Display)				
CHANTECH NVIDIA GeForce4 MX440-8X				X
Boot - Windows XP Professional Advanced Options Menu				

Safe Mode	X			
Reboot	X			
Return to OS Choices Menu	X			
<b>Basic Function Test</b>				
SATA Port0	X			
SATA Port1			X	
SATA Port2	X			
SATA Port3			X	
PS/2 Mouse and Keyboard	X			
USB Mouse and Keyboard	X			
COM Port Mouse detect	X			ACPI / APM mode
<b>LAN Function Test</b>				
LAN1 --- Auto	X			
LAN2 --- Auto	X			
<b>Audio Function Test</b>				
Audio 2.1 Channel Test	X			
S/P DIF Test			X	
Play Audio Function Test	X			
<b>Start Menu</b>				
Log off User	X			
Shut down	X			
Standby	X			
Restart	X			
Hibernate	X			

## 8. BIOS Function Test

### 8.1. Boot Sequence Test

Test Item	Result			Note
	Pass	Fail	N/A	
Floppy			X	
Hard Disk	X			
CDROM			X	
USB HDD	X			
USB Floppy	X			
USB CD-ROM	X			
LAN [ Boot From LAN First ]	X			
Disable			X	

### 8.2. Power Management Test

#### 8.2.1. APM Power Management Test

Test Item	Setting Test	Result			Note
		Pass	Fail	N/A	
Suspend Mode	Function Test			X	
Power Button	Delay 4 Sec			X	Soft-Off By PWRBTN
Power Button	Instant-Off			X	Soft-Off By PWRBTN

#### 8.2.2. ACPI Power Management Test

Test Item	Result			Note
	Pass	Fail	N/A	
Enable ACPI Auto Configuration	X			
Enable Hibernation	X			From Windows 7
ACPI - S1 (POS)	X			Resume from PS/2 keyboard or mouse.
	X			Resume from USB keyboard or mouse.
ACPI - S3 (STR)	X			
Suspend Disable	X			

### 8.3. Power On after Power Failure Test

Test Item	Result			Note
	Pass	Fail	N/A	
Off	X			
On	X			
Former-Sts (Auto)	X			

### 8.4. CMOS Backup / Clear CMOS Test

Test Item	Result			Note
	Pass	Fail	N/A	
CMOS Backup	X			
Clear CMOS Test	X			Only Changed date and time

#### 8.4.1 After Clear CMOS , Display will show " CMOS Checksum Error"

Test Item	Result			Note
	Pass	Fail	N/A	
CMOS Checksum Error			X	

### 8.5. AAEON Tag Check Utility

Test Item	Result			Note
	Pass	Fail	N/A	
Check AAEON BIOS OK	X			AONCHECK.EXE

### 8.6. TPM Function Test

Test Item	Result			Note
	Pass	Fail	N/A	
No Change			X	
Clear			X	
Enable & Active			X	
Disable & Disactive			X	Detect TPM device under Windows.

### 8.7. IAMT Function Test

Test Item	Result			Note
	Pass	Fail	N/A	
IAMT Function			X	

### 8.8. CAN port Function Test

Basic Function Test					
Test Item	Interrupt: Polling or IRQ	Result			Note
		Pass	Fail	NA	
CAN1 transmits CAN2	CAN1:			X	
	CAN2			X	
CAN2 transmits CAN1	CAN2:			X	
	CAN1:			X	

### 8.9. Supervisor / User Password Test

Test Item	Result			Note
	Pass	Fail	N/A	
Supervisor Password			X	
User Password			X	

### 8-10. Backlight Controller

CPU Board [ X ]N450 [ ]D510:

Test Item	Actual (V)		Result			Note
	18bit	24bit	Pass	Fail	N/A	
100%	0.02		X			
75%	1.25		X			
50%	2.53		X			
25%	3.80		X			
0%	5.08		X			



## 9. Performance Test

### 9.1. Performance Test

Test Result: (Display set 1024\*768 test)

Testing Software	Scope		Note
	AAEON	Ref.	
<b>PCMark2002</b>			
CPU	2060	-	
Memory	2436	-	
HDD	233	-	
Benchmark (A)	-	-	
<b>PCMark2005</b>			
PCMark	N/A	-	PCMarks
CPU	1161	-	
Memory	1236	-	
Graphics	519	-	
HDD	1078	-	
Benchmark (B)	-	-	
Average Efficiency	-	-	

Testing Software	Scope		Note
	AAEON	Ref.	
<b>3Dmark2003 v360</b>			
3Dmark Score	569	-	
CPU Score	173	-	
Benchmark (A)	-	-	
<b>3Dmark2001</b>			
3Dmark Score	1907	-	

Testing Software	Scope		Note
	AAEON	Ref.	
<b>Final Reality V1.01—BenchMark Test</b>			<b>XP and Windows 7</b>
2D image	10.70	-	Reality marks
3D	2.92	-	
Bus transfer	11.48	-	
Overall	6.54	-	
Benchmark (A)	-	-	

### 9.2. Memory Test

Test Item	Result			Note
	Pass	Fail	N/A	
MEM v4.10 Overnight Test	X			