

Report NO:11P010012

AEC-6612-A3

Fan-less embedded controller with Intel D525 Processor

Bulletin 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 <hr style="width: 80%; margin: 0 auto;"/> 2011/8/18	Approval <hr style="width: 80%; margin: 0 auto;"/> Jansin Lee	Test Engineer <hr style="width: 80%; margin: 0 auto;"/> Anderson Lin
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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 following:

- 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 would be updated when re-test completed in product next change version.

Specification Validation

Main Specification

Item	Specification	Result			Note
		Pass	Fail	N/A	
Product Name	AEC-6612-A3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Construction	Rugged Aluminum Alloy Chassis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
CPU Board	GENE-LN05	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Processor	Intel Atom D525 processor 1.8GHz.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
System Memory	200 pin DDRIII 533/667 SDRAM SODIMM X 1, Max.4GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Storage	Onboard Compact Flash slot X 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Front I/O	Power ON/OFF switch x 1 SYS LED x 1 HDD LED x 1 COM port x 6 Power inlet x 1 VGA x 1 LAN x 2 USB 2.0 x 6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Rear I/O	CF slot x 1, DIO x 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Expansion	MINI card x 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I/O Spec.	COM 1/3/4/5 6: RS-232, COM 2: RS-232/422/485	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Power Supply	1. ATX/ACPI Power function 2. DC Input 12 V (Power jack with lockable)/9-30V 3. Option AC power adapter , input voltage range 100~240 V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dimensions	197 mm(W) x 57.2 mm(H) x 110 mm(D) 7.8" x 2.3" 4.3"	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Net weight	1.1Kg	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Gross weight	2.8Kg	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Carton size	305mm x 240mm x 200mm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Color	Silver gray	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

O.S. Support

Item	Specification	Result	Note
Microsoft Windows	Windows XP Professional	☒	
Microsoft Windows	Windows 7	☒	
Linux	Fedora	☒	

Environmental Specifications

Item	Specification
Operating temperature	4°F ~ 113°F (-20°C ~ 45°C)
Storage temperature	4°F ~ 158°F (-20°C ~ 70°C)
Storage humidity	5 ~ 95% @ 40C, non-condensing
Vibration	5g RMS / 5 ~ 500Hz / operation – CFD 1g RMS / 5 ~ 500Hz / operation – HDD
Shock	50G peak acceleration (11 msec. duration) – CFD 20G peak acceleration (11 msec. duration) – HDD
Drop	92cm (1 Corner, 3 Edge, 6 Surface)
EMC	CE /FCC class A

Note: Please refer Environment Test Report for detail information

Platform Information

Item	Device Information	Test Item
System Model	AEC-6612-A3	1,2,3
PCB Model / Ver.	GENE-LN05 (B 1.0)	1,2,3
BIOS / Version	AEC-6612-A3 BIOS R 0.1(07/29/2011)	1,2,3
CPU Type	Intel Atom D525 processor 1.8GHz.	1,2,3
Memory Type	Kingston DDR3-1066 4GB KVR1066D3S7/4G 1.5V(hynix H5TQ2G83BFR H9C)	1,2,3
SATA HDD	FUJITSU SATA2 2.5" 80GB-MHZ2080BH	1,2,3
LCD Monitor	Samsung SyncMaster BX2450	1,2,3
OS Support	Windows 7 Ultimate 32Bit	1,2,3
	Windows XP Professional English SP3 32 Bit	1,2,3
Power Supply	Fedora 12	1,2,3
	AC/DC Adapter : FSP-036-1AD101C / DC 12V / 3.0A	1,2,3,

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1. I/O Peripheral Function Test

I/O Function	Result			Note
	Pass	Fail	N/A	
Compact Flash	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install O.S to CF
COM 1-232	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
COM 2-232	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM 3-232	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM 4-232	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM 5-232	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM 6-232	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM 2-422	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM 2-485	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 1/2 Ports	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 3/4 Ports	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 5/6 Ports	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 2.0 1/2 Ports	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 2.0 3/4 Ports	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 2.0 5/6 Ports	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LAN 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LAN 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DIO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Front Panel	Result			Note
	Pass	Fail	N/A	
Power On Button	<input checked="" type="checkbox"/>			
HDD LED	<input checked="" type="checkbox"/>			
Power LED	<input checked="" type="checkbox"/>			

2. O.S. Compatibility Test

2.1. English Fedora 12 – Kernel 2.6.31.5- 127.fc12

No Support

x32 Driver Information:

Chipset Software	Fedora 12 default driver
Graphics Media	Fedora 12 default driver
LAN Driver	Fedora 12 default driver
	Fedora 12 default driver
Audio Driver	Fedora 12 default driver

Install OS to SATA HDD:

Installation	Result			Note
	Pass	Fail	N/A	
Kernel 2.6.31.5- 127.fc12	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Test Results:

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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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

2.2. Windows XP English Professional Version 32/64Bit

[] No Support

[X] x32 Driver Information:

Chipset Software	Intel(R) Chipset Device Software:9.1.1.1009(03/09/2009)
Graphics Media	Intel Graphics Media Accelerator 3125 6.14.10.5244(03/17/2010)
LAN Driver	Intel(R)82567-V3 Gigabit Network Connection 10.1.9.0(04/07/2010) Intel(R)82583V Gigabit Network Connection 11.4.7.0(12/04/2009)
Audio Driver	N/A

Install OS to SATA HDD:

Installation	Result			Note
	Pass	Fail	N/A	
English Windows XP Professional 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"/>	
Boot - Windows XP Professional Advanced Options Menu				
Safe Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Basic Function Test				
PS/2 Mouse and Keyboard	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Line In Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Microphone Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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	<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"/>	

2.3. Windows 7 Ultimate English Version 32/64Bit

[] No Support

[X] x32 Driver Information:

Chipset Software	Intel(R) Chipset Device Software:9.1.1.1009(03/09/2009)
Graphics Media	Intel Graphics Media Accelerator HD 8.14.10.2117(04/19/2010)
LAN Driver	Intel(R)82567-V3 Gigabit Network Connection 10.1.9.0(04/07/2010) Intel(R)82583V Gigabit Network Connection 11.4.7.0(12/04/2009)
Audio Driver	N/A

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"/>	
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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Line In Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Microphone Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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	<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"/>	

3. Performance Test

Hardware Information with Windows 7 Ultimate English SP1 32 Bit Driver Version	
CPU	Intel® Atom™ processor D525 (1M Cache, 1.80 GHz)
Memory	Kingston DDR3-1066 4GB KVR1066D3S7/4G 1.5V(hynix H5TQ2G83BFR H9C)
SATA HDD	FUJITSU SATA2 2.5" 80GB-MHZ2080BH

3.1. Performance Test

Test Result: (Display set 1024*768 test)

Testing Software	Scope		Note
	AAEON	Ref.	
PCMark07			
CPU	N/A	-	
Memory	N/A	-	
HDD	N/A	-	
Benchmark (A)	647		
Performance Test 7.0			
PassMark Rating	342	-	
CPU	704.7	-	
Memory	323.8	-	
2D Graphics	141.5	-	
3D Graphics	70.1	-	
HDD	349.8	-	
Benchmark (B)	-		
Average Efficiency	-		

Testing Software	Scope		Note
	AAEON	Ref.	
3Dmark2003 v360			
3Dmark Score	806	-	
CPU Score	300	-	
Benchmark (A)	-		
3Dmark05 v130			
3Dmark Score	352	-	
CPU Score	2553	-	
Benchmark (B)	-		
Average Efficiency	-		

3.2. Overnight Test

Test Item(Over 8 hours)	Result			Note
	Pass	Fail	N/A	
MEM v4.20 Overnight Test	<input checked="" type="checkbox"/>			
Burn In Test V 6.0	<input checked="" type="checkbox"/>			
Prime 95	<input checked="" type="checkbox"/>			
RTC(Power On)	<input checked="" type="checkbox"/>			
RTC(Power Off)	<input checked="" type="checkbox"/>			