

AIMB-501G2

Intel Celeron G1620 2.7G CPU

Test Report

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Reviewed by	Julia Yang	Job Title	Supervisor	Revision	V1.0
Approved by	Julia Yang	Job Title	Supervisor	Release Status	Preliminary Release

Revision History :

Date	Revision	Description	Creator
2013/05/02	1.0	The First version released.	Austin Chen

Test Programs & Equipments :

Test Program	Version / Description
3DMark 2006	Current build (Depends on the hardware capability of the DUT.)
3DMark Vantage	Current build (Depends on the hardware capability of the DUT.)
CPU-z V1.64	Use current version
ORTHOS.exe	For CPU Burn-In test.
Passmark Burn-In Test Pro v7.1	Need update to the current build
Reboot v3.0	v3.0

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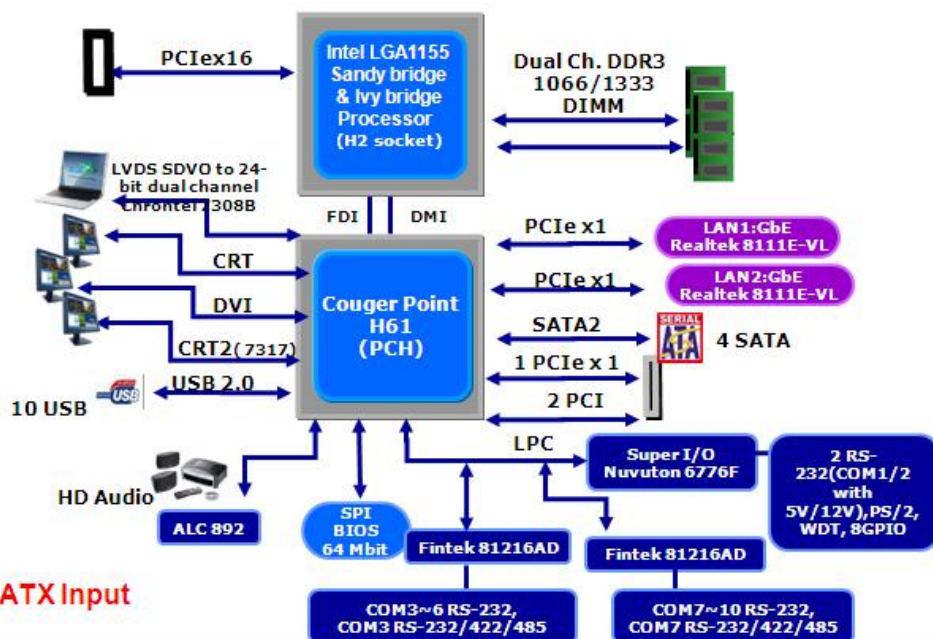
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Product Specification :

Block diagram



Processor	
CPU Type	Intel LGA 1155 Socket Sandy Bridge / Ivy Bridge
Processor Family	Intel LGA 1155 Socket Sandy Bridge(32nm) / Ivy Bridge (22nm)
Long Life Processor List	Sandy Bridge: Intel Core i7-2600 3.4GHz, Intel Core i5-2400 3.1GHz, Intel Core i3-2120 3.3GHz Pentium G850 2.9GHz, Celeron G540 2.5GHz Ivy Bridge: Intel Core i7-3770 3.4GHz, Intel Core i5-3550S 3.0GHz
VRD	follow IPMSB
PCIex 16 (Gen 2.0)	Sugar Bay (DT) supports one controller PCIe x 16 lane(PCI-Express Gen. 2)
Interface to PCH	DMI, FDI
Package	LGA 1155(H2 socket)
L3 Cache	8MB, 6MB, 3MB, 2MB
System Memory	
Memory Type	DDR3 1066/ 1333 MHz
DIMM #	Two (Dual Channel), 240PIN DDR3 Socket
Max. Capacity	8 GB
Max. Capacity per DIMM	4 GB
ECC support	NO
Registered memory	NO

South Bridge	
Controller Hub	Intel 6 series Cougar Point(DT) PCH H61, 27 x 27mm(6.1W TDP)
PCI Compliant	Not support for H61. Need PCI ontroller IC x 2
PCI Bus	Two 32-bit/ 33 MHz PCI Masters(through PCIe to PCI switch IC IT8892E =>2PORTS PCI)
PCI Express	total 6 PCIe x 1.
SATA	Four 300 MB/sec SATAs
USB	10 ports(4 rear ,6 internal)Ten USB 2.0.
SATA	Four 300 MB/sec SATAs
RAID	None
Watchdog Timer	1~255 sec programmable
Display	
Chipset	Intel® HD Graphics 2000/3000 (follow CPU)
Features	DirectX 10
Video Memory	Shared memory up to 224 MB
Max. resolution	2048 x 1536 / 32bit / 75 Hz(VGA)
VGA	Yes 2048 x 1536
DVI-I	1, display port from PCH (on board DVI pin header with DVI signal to support HDMI via DVI-to-HDMI adapter), via PCH internal DVI though level-shift 02GP2U-0004000(ASMEDIA ASM1442)
LVDS	Support 18/24-bit 36-48bit single/dual channel, Up to WXGA 1366*768, through Chrontel 7308B
VGA2	Supports 2nd CRT, via Chrontel 7317 SDVO transmitter
Dual Display	LVDS + CRT1, CRT1 + CRT2, CRT1+DVI (Default: LVDS+CRT1, CRT1+DVI)
Gigabit Ethernet	
Chipset	Dual Realtek 8111E-VL (near Audio conn) / Giga Lan(P/N:1410021647)
LAN LED	Right Side: Green: Link (On)/ Active (Flash) Left Side: Orange: 100Mbps (On) / 10Mbps (Off), Green: 1000Mbps (On)
Disable LAN through BIOS	Yes
WOL	Yes
Boot from LAN	Yes
ASF	N/A
Audio	
Codec	HD Audio
Chipset	ALC892
Audio Amplifer	Dual channel 3W Amplifer, TI TDA1517P(Advansus P/N: 06GA14D1151700)
Rear panel output	Line-out, Mic-In, (Line-in)
Onboard Connector	Buzzor

Test Results Definition :

Criteria	Definition
PASS	Test result pass and function work perfectly.
Fail	Test fail or can not meet the spec requirement.
Limitation	There are no plans to fix this erratum.
Skip	Test can not execute due to no test program, driver or test device.
N/A	Spec not support or driver not ready.
Note	Reference Data

Test Results Summary :

Num.	Test Item	Result	Remark
Chapter.1	CPU Function Test		
1.01	Intel CPU Celeron G1620 2.7G SPEC Tes	Pass	
Chapter.2	System Stability Test. (Win7)		
2.01	Win7 combine with Power On/Off Test (Deep Sleep Mode Disabled or Not Support.)	Pass	
2.02	Warm Boot Stress Test	Pass	
2.03	CPU ORTHOS Sress Test	Pass	
2.04	3D Benchmark Stress Test	Pass	

System Configuration :

Item.	Description.	Item.	Description.
Project Name.	AIMB-501G2	M/B Name.	AIMB-501G2
BIOS Version.	A501X227	PCB Version.	A101-4
CPU Model/Info	Intel LGA 1155 Socket Sandy Bridge / Ivy Bridge Intel Celeron G1620 2.7G CPU		
Memory Type/Info	ELPIDA DDR3 1333 MHz 2GB*2 (DR2G-145, DR2G-146)		
Total DIMM#	2	Total Memory Size	4GB
Controller Hub	Intel 6 series Cougar Point(DT) PCH H6		
Graphic Controller	Intel® HD Graphics		
LAN1 Controller	Realtek 8111E-VL	LAN2 Controller	Realtek 8111E-VL
Audio Codec	Realtek ALC892		
HDD Type/Info.	WD 2.5" SATA2 HDD WD1600BEVT 160GB	ODD Type/Info.	LITE-ON DH-20A3S DVD Rewritable Drive
Power Supply Model	SUPER FLOWER AT-400P12N 400W		

Driver List :

Win7 Ultimate SP1_x86			
Driver	Date	Version	Note/Issue ID
Chip INF	11/20/2010	9.2.0.1016_WHQL	
On-board VGA Driver	6/6/2012	8.15.10.2778_WHQL	
On-board Audio Driver	12/13/2011	6.0.1.6526_WHQL	
Inter ME Driver	11/9/2011	8.0.0.1262_WHQL	
LAN1 Driver	6/10/2011	7.46.610.2011_WHQL	
LAN2 Driver	6/10/2011	7.46.610.2011_WHQL	
USB2.0 Driver	12/21/2010	9.2.0.1021_WHQL	

Chapter 1 : CPU Function Test

1.01 Intel CPU Celeron G1620 2.7G SPEC Test

1.01.1 Test Purpose :

The purpose of this test is to validate and ensure the CPU compatibility of the DUT

1.01.2 Test Data - CPU Info check.

Test Item	Description	Result	Remark
BIOS Info. Check	Check POST display information. Check the CPU speed, Frequency...info in BIOS SETUP page.	Pass	
CPU-z Info Check.	Check CPU info by using CPU-Z v1.64 .	Pass	

1.01.3 Windows OS Installation Test.

Test Item	Description	Result	Remark
XP Pro SP3 Installation.	Must able to install XP SP3 with all system drivers needed without any issue occurs and the system can remain function stabilized.	Pass	
Win7 Ultimate x86 SP1 Installation.	Must able to install Win7 with all system drivers needed without any issue occurs and the system can remain function stabilized.	Pass	

Chapter 2 : System Stability Test. (Win7)

2.01 Win7 combine with Power On/Off Test (Deep Sleep Mode Disabled or Not Support.)

ATX mode (AC Off) Test

Test Item	Description	Result	Remark
Power On/Off test (ATX mode, AC off)	1. BIOS item: After Ac power Failure set as "Always on/On" 2. test at room temperature for 200 duration cycles 3. booting rate= 100%	Pass	

Power On/Off (ATX mode , AC Off) Test

Test Item	Description	Result	Remark
Power On/Off test (ATX mode, AC ON)	1. BIOS item: After Ac power Failure set as "Off" 2. test at room temperature for 1000 duration cycles 3. booting rate =100%	Pass	

Power On/Off (AT Mode)

Test Item	Description	Result	Remark
Power On/Off test (AT mode)	1. BIOS item: After AC Power Failure set as "OFF" 2. H/W jumper set as AT mode (AIMB, PCE, ...) 3. Use real AT power (PCM...)	Pass	

H/W Reset (Reset Button) Test

Test Item	Description	Result	Remark
H/W Reset test	booting rate =100% test at room temperature for 200 duration cycles	Pass	

2.02 Warm Boot Stress Test

2.02.01 Test Purpose :

The purpose of this test is to analyze and validate the functional performance capabilities quality and stability.

Test Data : Reboot v3.0

Test Item	Description	Result	Remark
Warm boot test (Reboot 3.0)	Win7 Ultimate SP1 X86 1. Must PASS for 500 duration cycles. 2. Time Out Before reboot:10-25secs 3. booting rate =100%	Pass	

2.03 CPU ORTHOS Sress Test

2.03.01 Test Purpose :

The purpose of this test is to stress and ensure the stability of the graphic controller.

Test Data : ORTHOS v0.41.110.18

Test Item	Description	Result	Remark
CPU ORTHOS Stress Test	Win7 Ultimate SP1 X86 1. Please refer to [TCM]_CPU Stress tool_ORTHOS Test Method.doc for more detail test instructions. 2. Use Top speed CPU and Memory + full memory loading to test. 3. burn-in for 12 hours. The DUT MUST maintain a stable condition after the test has been completed.	Pass	

2.04 3D Benchmark Stress Test

2.04.01 Test Purpose :

The purpose of this test is to stress and ensure the stability of the graphic controller.

Test Data : 3DMark06 v120

Test Item	Description	Result	Remark
3D Benchmark Stress Test	Win7 Ultimate SP1 X86 1. Windows Desktop & Monitor Resolution : 1920*1080 2. 3DMark06 : Select All tests./ Resolution: 1920*1080 / Loop all selected tests. 3. Run 3DMark06 for 12 hours. The DUT MUST maintain a stable condition after the test has been completed.	Pass	