

Gaia 404 / Gaia 408 / Gaia 416-60 / Gaia 416-120

Quick Guide

Version 1.0 Published August 2009 Copyright©2009 ASRock INC. All rights reserved. Copyright©2009 Huper Laboratories CO., LTD. All rights reserved.

— 1

Copyright Notice:

No part of this manual may be reproduced, transcribed, transmitted, or translated in any language, in any form or by any means without the written consent of hupeLab and ASRock Inc., except duplication of documentation by the purchaser for backup purpose.

Products and corporate names appearing in this manual may or may not be registered trademarks or copyrights of their respective companies, and are used only for identification or explanation and to the owners' benefit without intent to infringe.

Disclaimer:

Specifications and information contained in this manual are provided for informational use only. It is subject to change without notice and should not be recognized as a commitment by huperLab and ASRock. huperLab and ASRock assume no responsibility for any errors or omissions that may appear in this manual. With respect to the contents of this manual, huperLab and ASRock do not provide any kind of warranty, either expressed or implied.

In no event should huperLab and ASRock, its directors, officers, employees, or agents be liable for any indirect, special, incidental, or consequential damages (including damages for loss of profits, loss of business, loss of data, interruption of business and the like).



This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

CALIFORNIA, USA ONLY

The Lithium battery adopted on this motherboard contains Perchlorate, a toxic substance controlled in Perchlorate Best Management Practices (BMP) regulations passed by the California Legislature. When you discard the Lithium battery in California, USA, please follow the related regulations in advance. "Perchlorate Material-special handling may apply, see www.dtsc.ca.gov/hazardouswaste/perchlorate"

For more product details, please visit huperLab's website at www.huperlab. com

Contents

1 Int	roduction	5
1.	1 Package Contents	5
1.	2 Specifications	6
1.	3 Motherboard Layout Gaia404 (A330GC-H4) /	
	Gaia408 (A330GC-H8)	9
1.	4 Motherboard Layout Gaia416-60 (A330GC-H16-60)	
	/ Gaia416-120 (A330GC-H16-120)	10
1.	5 I/O Panel	11
2 Ins	tallation	12
2.	1 Screw Holes	12
2	2 Pre-installation Precautions	12
2.	3 Installation of Memory Modules (SODIMM)	13
2.	4 Expansion Slot (PCIE Slot)	14
2	5 Jumpers Setup	14
2.	6 Onboard Headers and Connectors	15
2.	7 SATAII Hard Disk Setup Guide	17
2.	8 Serial ATA (SATA) / Serial ATAII (SATAII) Hard Disks	
	Installation	18
2	D. Driver Installation Cuide	10
۷.	9 Driver Installation Guide	18
3 BIC	OS SETUP UTILITY	18 19
3 BIC 3.	ONVERTINGUIDE	19
3 BIC 3.	S SETUP UTILITY 1 Introduction 3.1.1 BIOS Menu Bar	18 19 19 19
3 BIC 3	S SETUP UTILITY 1 Introduction 3.1.1 BIOS Menu Bar 3.1.2 Navigation Keys	19 19 19 20
3 BIC 3.	Driver installation Guide S SETUP UTILITY 1 Introduction 3.1.1 BIOS Menu Bar 3.1.2 Navigation Keys 2 Main Screen	19 19 19 20 20
3 BIC 3. 3. 3. 3.	S SETUP UTILITY 1 Introduction 3.1.1 BIOS Menu Bar 3.1.2 Navigation Keys 2 Main Screen 3 Smart Screen	19 19 19 20 20 21
3 BIC 3. 3. 3. 3. 3.	S SETUP UTILITY 1 Introduction 3.1.1 BIOS Menu Bar 3.1.2 Navigation Keys 2 Main Screen 3 Smart Screen 4 Advanced Screen	19 19 19 20 20 21 22
3 BIC 3. 3. 3. 3. 3. 3.	Driver Installation Guide DS SETUP UTILITY 1 Introduction 3.1.1 BIOS Menu Bar 3.1.2 Navigation Keys 2 Main Screen 3 Smart Screen 4 Advanced Screen 3.4.1 CPU Configuration	19 19 20 20 21 22 23
3 BIC 3. 3. 3. 3. 3.	Driver Installation Guide DS SETUP UTILITY 1 Introduction 3.1.1 BIOS Menu Bar 3.1.2 Navigation Keys 2 Main Screen 3 Smart Screen 4 Advanced Screen 3.4.1 CPU Configuration 3.4.2 Chipset Configuration	19 19 19 20 20 21 22 23 24
3 BK 3. 3. 3. 3. 3.	S SETUP UTILITY 1 Introduction 3.1.1 BIOS Menu Bar 3.1.2 Navigation Keys 2 Main Screen 3 Smart Screen 4 Advanced Screen 3.4.1 CPU Configuration 3.4.2 Chipset Configuration 3.4.3 ACPI Configuration	19 19 19 20 21 22 23 24 25
3 BK 3. 3. 3. 3. 3.	S SETUP UTILITY 1 Introduction 3.1.1 BIOS Menu Bar 3.1.2 Navigation Keys 2 Main Screen 3 Smart Screen 4 Advanced Screen 3.4.1 CPU Configuration 3.4.2 Chipset Configuration 3.4.3 ACPI Configuration 3.4.4 Storage Configuration	19 19 19 20 20 21 22 23 24 25 26
3 BK 3. 3. 3. 3.	S SETUP UTILITY 1 Introduction 3.1.1 BIOS Menu Bar 3.1.2 Navigation Keys 2 Main Screen 3 Smart Screen 4 Advanced Screen 3.4.1 CPU Configuration 3.4.2 Chipset Configuration 3.4.3 ACPI Configuration 3.4.4 Storage Configuration 3.4.5 Super IO Configuration	19 19 20 21 22 23 24 25 26 28
3 BK 3. 3. 3. 3.	S SETUP UTILITY 1 Introduction 3.1.1 BIOS Menu Bar 3.1.2 Navigation Keys 2 Main Screen 3 Smart Screen 4 Advanced Screen 3.4.1 CPU Configuration 3.4.2 Chipset Configuration 3.4.3 ACPI Configuration 3.4.4 Storage Configuration 3.4.5 Super IO Configuration 3.4.6 USB Configuration	19 19 20 20 21 22 23 24 25 26 28 28
3. 3. 3. 3. 3. 3.	S SETUP UTILITY 1 Introduction 3.1.1 BIOS Menu Bar 3.1.2 Navigation Keys 2 Main Screen 3 Smart Screen 4 Advanced Screen 3.4.1 CPU Configuration 3.4.2 Chipset Configuration 3.4.3 ACPI Configuration 3.4.4 Storage Configuration 3.4.5 Super IO Configuration 3.4.6 USB Configuration 3.4.6 USB Configuration 5 Hardware Health Event Monitoring Screen	19 19 20 20 21 22 23 24 25 26 28 28 29
3. 3. 3. 3. 3. 3. 3. 3. 3. 3.	S SETUP UTILITY 1 Introduction 3.1.1 BIOS Menu Bar 3.1.2 Navigation Keys 2 Main Screen 3 Smart Screen 3 Smart Screen 4 Advanced Screen 3.4.1 CPU Configuration 3.4.2 Chipset Configuration 3.4.3 ACPI Configuration 3.4.4 Storage Configuration 3.4.5 Super IO Configuration 3.4.6 USB Configuration 5 Hardware Health Event Monitoring Screen	19 19 20 20 21 22 23 24 25 26 28 28 29 30
3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3	S SETUP UTILITY 1 Introduction 3.1.1 BIOS Menu Bar 3.1.2 Navigation Keys 2 Main Screen 3 Smart Screen 4 Advanced Screen 3.4.1 CPU Configuration 3.4.2 Chipset Configuration 3.4.3 ACPI Configuration 3.4.4 Storage Configuration 3.4.5 Super IO Configuration 3.4.6 USB Configuration 3.4.6 DSB Configuration 3.4.6 Storeen 3.6.1 Boot Screen 3.6.1 Boot Settings Configuration	19 19 20 20 21 22 23 24 25 26 28 28 29 30 30
3 BK 3. 3. 3. 3. 3. 3. 3. 3. 3. 3.	S SETUP UTILITY 1 Introduction 3.1.1 BIOS Menu Bar 3.1.2 Navigation Keys 2 Main Screen 3 Smart Screen 4 Advanced Screen 3.4.1 CPU Configuration 3.4.2 Chipset Configuration 3.4.3 ACPI Configuration 3.4.4 Storage Configuration 3.4.5 Super IO Configuration 3.4.6 USB Configuration 5 Hardware Health Event Monitoring Screen 3.6.1 Boot Settings Configuration 7 Security Screen	19 19 20 21 22 23 24 25 26 28 29 30 30 31

- 3

4 Soft	ware Support	33
4.1	Install Operating System	33
4.2	Support CD Information	33
	4.2.1 Running Support CD	33
	4.2.2 Drivers Menu	33
	4.2.3 Utilities Menu	33
	4.2.4 Contact Information	33
5 hup	erVision Software Installation	34
5.1	Easy Steps to install software	35
5.2	Start Recording Instruction	37
5.3	Playback Recordings Instruction	40

Chapter 1 Introduction

Thank you for purchasing huperLab *Gaia404 / Gaia408 / Gaia416-60 / Gaia416-120* motherboard, a reliable motherboard produced under huperLab's consistently stringent quality control. It delivers excellent performance with robust design conforming to huperLab's commitment to quality and endurance.

In this manual, chapter 1 and 2 contain introduction of the motherboard and step-bystep guide to the hardware installation. Chapter 3 and 4 contain the configuration guide to BIOS setup and information of the Support CD. Chapter 5 contains installation instruction for huperLab software.



Because the motherboard specifications and the BIOS software might be updated, the content of this manual will be subject to change without prior notice. In case any modifications of this manual occur, the updated version will be available on huperLab website. huperLab website <u>http://www.huperlab.com</u> If you require technical support related to this motherboard, please visit the website for specific information about the model you are using. <u>http://www.huperlab.com/bboard/</u>

1.1 Package Contents

huperLab *Gaia404 / Gaia408 / Gaia416-60 / Gaia 416-120* Motherboard (Mini-ITX Form Factor: 6.7-in x 6.7-in, 17.0 cm x 17.0 cm) huperLab *Gaia404 / Gaia408 / Gaia416-60 / Gaia 416-120* User Guide huperLab *Gaia404 / Gaia408 / Gaia416-60 / Gaia 416-120* Driver & Utility Support CD huperVision 4000 Software CD

Motherboard Accessories

Gaia404: One 4CH Video in & Audio in Cable Gaia408: One 8CH Video in & Audio in Cable Gaia416-60 / Gaia 416-120: One 16CH Video in Cable I/O shield Audio in Cable with bracket (Optional) Two Serial ATA (SATA) Data Cable(Optional)

- 5

Platform	- Mini-ITX Form Factor: 6.7-in x 6.7-in, 17.0 cm x 17.0 cm		
	- Solid Capacitor design (100% Japan-made		
	high-quality Conductive Polymer Capacitors)		
CPU	- Intel [®] Dual-Core Atom™ Processor 330		
	- Supports FSB533 MHz		
	- Supports Hyper-Threading Technology (see CAUTION 1)		
	- Supports EM64T CPU		
Chipset	- Northbridge: Intel [®] 945GC		
	- Southbridge: Intel [®] ICH7		
Memory	- Dual Channel DDR2 Memory Technology (see CAUTION 2)		
	- 2 x DDR2 SODIMM slots		
	- Supports DDR2 533 / 667/ 800 SODIMM, run at 533 speed,		
	non-ECC, un-buffered memory		
	- Max. capacity of system memory: 4GB (see CAUTION 3)		
Expansion Slot	- 1 x PCI Express slot		
Graphics	- Intel [®] Graphics Media Accelerator 950		
	- Pixel Shader 2.0, DirectX 9.0		
	- Max. shared memory 224MB (see CAUTION 4)		
Audio	- 5.1 CH Windows [®] Vista [™] Premium Level HD Audio		
	(Realtek ALC662 Audio Codec)		
LAN	- 2 x PCIE Gigabit LAN 10 / 100 / 1000 Mb/s		
	- Realtek RTL8111DL		
	- Supports Wake-On-LAN		
	- Supports Dual LAN features		
Rear Panel I/O	I/O Panel		
	- 1 x PS/2 Mouse Port		
	- 1 x PS/2 Keyboard Port		
	- 1 x DVR Audio / Video input		
	- 1 x Serial Port: COM1		
	- 1 x VGA Port		
	- 4 x Ready-to-Use USB 2.0 Ports		
	- 2 x RJ-45 LAN Ports with LED (ACT/LINK LED and SPEED		
	LED)		
	- HD Audio Jack: Line in / Front Speaker / Microphone		
Connector	- 4 x SATAII 3.0 Gb/s connectors (No Support for RAID and		
	"Hot Plug" functions) (see CAUTION 5)		
	- 1 x ATA100 mini IDE connector with 5V power (supports 2 x		
	IDE devices)		
	- System / NB FAN connector		
	- 24 pin ATX power connector		
L	· · ·		

1.2 Specifications

6

	- 2 x USB 2.0 headers (support 4 USB 2.0 ports) (see CAU-
	TION 6)
	- 16 pin GPIO connector (support 8 GPIO)
	- 20 pin Audio input connector (support 16CH Audio in)
	- 26 pin Video input connector
BIOS Feature	- 4Mb AMI BIOS
	- AMI Legal BIOS
	- Supports "Plug and Play"
	- ACPI 1.1 Compliance Wake Up Events
	- AMBIOS 2.3.1 Support
	- Supports Smart BIOS
Support CD	- Drivers, Utilities, Antivirus Software (Trial Version), huperVision
	4000 Surveillance Software Suite
Unique Feature	- ASRock Instant Flash (see CAUTION 7)
	- Hybrid Booster:
	- ASRock U-COP
	- Boot Failure Guard (B.F.G.)
Hardware	- System Temperature Sensing
Monitor	- CPU Temperature Sensing
	- NB Fan Tachometer
	- System Fan Tachometer
	- System Quiet Fan
	- Voltage Monitoring: +12V, +5V, +3.3V, Vcore
OS	- Microsoft® Windows® XP / Vista™
Certifications	- FCC, CE
· · · · · · ·	

* For detailed product information, please visit website: <u>http://www.huperlab.com</u>

- 7

CAUTION!

- 1. About the setting of "Hyper Threading Technology", please refer to section 3.4.1(page 23)
- This motherboard supports Dual Channel Memory Technology. Before you implement Dual Channel Memory Technology, make sure to read the installation guide of memory modules in section 2.3 (page 13) for proper installation.
- Due to chipset and CPU limitation, the actual memory size might be less than 4GB for the reservation of system usage under Windows[®] XP, Windows[®] Vista[™].
- The maximum shared memory size is defined by the chipset vendor and is subject to change. Please check Intel[®] website for the latest information.
- Before installing SATAII hard disk to SATAII connector, please read "SATAII Hard Disk Setup Guide" in section 2.8 (page 18) to adjust your SATAII hard disk drive to SATAII mode. You can also connect SATA hard disk to SATAII connector directly.
- Power Management for USB 2.0 works fine under Microsoft[®] Windows[®] Vista[™] / XP SP1 or SP2.
- 7. ASRock Instant Flash is a BIOS flash utility embedded in Flash ROM. This convenient BIOS update tool allows you to update system BIOS without entering operating systems first like MS-DOS or Windows[®]. With this utility, you can press <F6> key during the POST or press <F2> key to BIOS setup menu to access ASRock Instant Flash. Just launch this tool and save the new BIOS file to your USB flash drive, floppy disk or hard drive, then you can update your BIOS only in a few clicks without preparing an additional floppy diskette or other complicated flash utility. Please be noted that the USB flash drive or hard drive must use FAT32/16/12 file system.



1.3 Motherboard Layout Gaia404 (A330GC-H4) / Gaia408 (A330GC-H8)

- 6 SATAII Connector (SATAII_4; Orange)
- 7 SATAII Connector (SATAII_2; Red)
- SATAII Connector (SATAII_1; Red) 8
- SATAII Connector (SATAII_3; Orange) 9
- 10 NB Fan Connector (NB_Fan1)
- 11 System Panel Header (PANEL1;Orange)
- 12 USB 2.0 Header (USB 6_7, Blue)
- North Bridge Controller
- 20 **CPU Heat Sink**
- 21 PCIE Slot (PCIE1)
- 22 Audio In
- 23 **Composite Out**
- 24 Video In
- 25 System Fan Connector (SYS_FAN1)





- 19 North Bridge Controller
- 20 **CPU Heat Sink**
- PCIE Slot (PCIE1) 21
- Audio In
- 22
- 23 **Composite Out**
- 24 Video In
- 25 System Fan Connector (SYS_FAN1)

10

7

8

9

10

11

12

SATAII Connector (SATAII_2; Red)

SATAII Connector (SATAII_1; Red)

NB Fan Connector (NB_Fan1)

USB 2.0 Header (USB 6_7, Blue)

SATAII Connector (SATAII_3; Orange)

System Panel Header (PANEL1;Orange)

1.5 I/O Panel



* There are two LED next to the LAN port. Please refer to the table below for the LAN port LED indications.

LAN Port LED Indications				
Activity / Link LED SPEED LED				
Status	Description		Status	Description
Off	No Link		Off	10Mbps connection
Blinking	Data Activity		Orange	100Mbps connection
On	Link		Green	1Gbps connection

	ACT/LINK	SPEED
_	LED	LED

LAN Port

---- 11

Chapter 2 Installation

Gaia404 / Gaia408 / Gaia416-60 / Gaia416-120 are a Mini-IXT form factor (6.7" x 6.7", $17.0 \times 17.0 \text{ cm}$) motherboard. Before you install the motherboard, study the configuration of your chassis to ensure that the motherboard fits into it.



Before installation or removal of the motherboard, please ensure to unplug the power cord. Failure to do so may cause physical injuries and damages to motherboard components.

2.1 Screw Holes

Place screws into the holes indicated by circles to secure the motherboard to the chassis.

Do not over-tighten the screws! Doing so may damage the motherboard.

2.2 Pre-installation Precautions

Take note of the following precautions before you install motherboard components or change any motherboard settings.

- 1. Unplug the power cord from the wall socket before touching any component.
- To avoid damaging the motherboard components due to static electricity, NEVER place your motherboard directly on the carpet or the like. Also remember to use a grounded wrist strap or touch a safety grounded object before you handle components.
- 3. Hold components by the edges and do not touch the ICs.
- Whenever you uninstall any component, place it on a grounded antistatic pad or in the bag that comes with the component.



Before you install or remove any component, ensure that the power is switched off or the power cord is detached from the power supply. Failure to do so may cause severe damage to the motherboard, peripherals, and/or components.



2.3 Installation of Memory Modules (SODIMM)

Gaia404 / Gaia408 / Gaia416-60 / Gaia416-120 motherboard provides two 200-pin DDR2 (Double Data Rate 2) SODIMM slots, and supports Dual Channel Memory Technology. For dual channel configuration, you always need to install two **identical** (the same brand, speed, size and chip-type) memory modules in the DDR2 SODIMM slots to activate Dual Channel Memory Technology. Otherwise, it will operate at single channel mode.



 It is not allowed to install a DDR memory module into DDR2 slot; otherwise, this motherboard and SODIMM may be damaged.

 If you install only one memory module or two non-identical memory modules, it is unable to activate the Dual Channel Memory Technology.

Installing a SODIMM



Please make sure to disconnect power supply before adding or removing SODIMM or the system components.

- . Unlock a SODIMM slot by pressing the retaining clips outward.
- Step 2. Align a SODIMM on the slot such that the notch on the SODIMM matches the break on the slot.





The SODIMM only fits in one correct direction. It will cause permanent damage to the motherboard and the SODIMM if you force the SODIMM into the slot at incorrect direction.

Step 3. Firmly insert the SODIMM into the slot until the retaining clips at both ends fully snap back in place and the SODIMM is properly seated.

2.4 Expansion Slot (PCIE Slot)

There is One PCIE slot on this motherboard.

PCIE slot: PCIE slot is used for PCI Express cards with x 1 lane width cards, such as Gigabit LAN card, SATA2 card, etc.

Installing an expansion card

- Step 1. Before installing the expansion card, please make sure the power supply is switched off or the power cord is unplugged. Please read the documentation of the expansion card and make adjustments to hardware settings for the card before you start the installation.
- Step 2. Remove the bracket facing the slot that you intend to use. Keep the screws for later use.
- Step 3. Align the card connector with the slot and press firmly until the card is completely seated on the slot.
- Step 4. Fasten the card to the chassis with screws.

2.5 Jumpers Setup

The illustrations show how jumpers are setup. When the jumper cap is placed on pins, the jumper is "Short". When no jumper cap is placed on pins, the jumper is "Open". The illustrations show a 3-pin jumper, whose pin1 and pin2 are "Short" when jumper cap is placed on top.



Jumper	Setting		Description
PS2_USB_PWR1	1_2	2_3	Short pin2, pin3 to enable
(see p.9/10 No. 14)		$\bigcirc \bullet \bullet$	+5VSB (standby) for PS/2
	+5V	+5VSB	or USB wake up events.

Note: To select +5VSB, it requires 2 Amp and higher standby current provided by power supply.

Clear CMOS	ଗର	
(CLRCMOS1, 2-pin jumper)		
(see p.9/10 No. 1)	2-pin jumper	

Note: CLRCMOS1 allows you to clear the data in CMOS. The data in CMOS includes system setup information such as system password, date, time, and system setup parameters. To clear and reset the system parameters to default setup, please turn off the computer and unplug the power cord from the power supply. After waiting for 15 seconds, use a jumper cap to short 2 pins on CLRCMOS1 for 5 seconds.



2.4 Onboard Headers and Connectors

4

Onboard headers and connectors are NOT jumpers. Do NOT place jumper caps over these headers and connectors. Placing jumper caps over the headers and connectors will cause permanent damage of the

Primary IDE Connector (43-pin IDE1, see p.10/11 No. 5)	PIN1 IDE1	
Serial ATAII Connectors (SATAII_1: see p.9/10, No. 8) (SATAII_2: see p.9/10, No. 7) (SATAII_3: see p.9/10, No. 9) (SATAII_4: see p.9/10, No. 6)	SATAIL_3 SATAIL_4	These Serial ATAII (SATEII) connectors support SATAII or SATA hard disk for internal storage devices. The current SATAII interface allows up to 3.0 Gb/s data transfer rate.
Serial ATA (SATA) Data Cable (Optional)	$\overline{\mathbf{O}}$	Either end of the SATA data cable can be connected to the SATA / SATAII hard disk or the SATAII
USB 2.0 Headers (9-pin USB6_7) (see p.9/10 No. 12)		connector on the motherboard. Besides two default USB 2.0 ports on the I/O panel, there are two USB 2.0 headers on this motherboard. Each USB 2.0 header can support two USB 2.0 ports.
(9-pin USB4_5) (see p.9/10 No. 13)		
System Panel Header (9-pin PANEL1) (see p.9/10 No. 11)	PLED- PLED- IGND IGND IGND IESET# HDLED- HDLED-	This header accommodates several system front panel functions.



2.7 SATAII Hard Disk Setup Guide

Before installing SATAII hard disk to your computer, please carefully read SATAII hard disk setup guide below. Some default setting of SATAII hard disks may not be at SATAII mode, which operates with the best performance. In order to enable SATAII function, please follow the instruction with different vendors to correctly adjust your SATAII hard disk to SATAII mode in advance; otherwise, your SATAII hard disk may fail to run at SATAII mode.

Western Digital

	7531 8642000
--	-----------------

If pin 5 and pin 6 are shorted, SATA 1.5Gb/s will be enabled. On the other hand, if you want to enable SATAII 3.0Gb/s, please remove the jumpers from pin 5 and pin 6.

SAMSUNG

	7 5 3 1
<u>ح</u> الــــــك	8642

If pin 3 and pin 4 are shorted, SATA 1.5Gb/s will be enabled. On the other hand, if you want to enable SATAII 3.0Gb/s, please remove the jumpers from pin 3 and pin 4.

HITACHI

Please use the Feature Tool, a DOS-bootable tool, for changing various ATA features. Please visit HITACHI's website for details: http://www.hitachigst.com/hdd/support/download.htm



The above examples are just for your reference. For different SATAII hard disk products of different vendors, the jumper pin setting methods may not be the same. Please visit the vendors' website for the updates.

2.8 Serial ATA (SATA) / Serial ATAII (SATAII) Hard Disks Installation

This motherboard adopts Intel® ICH7 south bridge chipset that supports Serial ATA (SATA) / Serial ATAII (SATAII) hard disks. You may install SATA / SATAII hard disks on this motherboard for internal storage devices. This section will guide you to install the SATA / SATAII hard disks.

- STEP 1: Install the SATA / SATAII hard disks into the drive bays of your chassis.
- STEP 2: Connect the SATA power cable to the SATA / SATAII hard disk.

STEP 3: Connect one end of the SATA data cable to the motherboard's SATAII connector.

STEP 4: Connect the other end of the SATA data cable to the SATA / SATAII hard disk.

2.9 Driver Installation Guide

To install the drivers to your system, please insert the support CD to your optical drive first. Then, the drivers compatible to your system can be auto-detected and listed on the support CD driver page. Please follow the order accordingly to install those required drivers.

Chapter 3 BIOS SETUP UTILITY

3.1 Introduction

This section explains how to use the BIOS SETUP UTILITY to configure your system. The BIOS FWH chip on the motherboard stores the BIOS SETUP UTILITY. You may run the BIOS SETUP UTILITY when you start up the computer. Please press <F2> during the Power-On-Self-Test (POST) to enter the BIOS SETUP UTILITY, otherwise, POST will continue with its test routines.

If you wish to enter the BIOS SETUP UTILITY after POST, restart the system by pressing $\langle Ctl \rangle + \langle Alt \rangle + \langle Delete \rangle$, or by pressing the reset button on the system chassis. You may also restart by turning the system off and then back on.



Because the BIOS software is constantly being updated, the following BIOS setup screens and descriptions are for reference purpose only, and they may not exactly match what you see on your screen.

3.1.1 BIOS Menu Bar

The top of the screen has a menu bar with the following selections:

Main	To set up the system time/date information
Smart	To load the BIOS according to your requirements
Advanced	To set up the advanced BIOS features
H/W Monitor	To monitor and set up the hardware features
Boot	To set up the default system device to locate and load the
	operating System
Security	To set up the security features
Exit	To exit the current screen or the BIOS SETUP UTILITY

Use < \leftarrow > key or < \rightarrow > key to choose among the selections on the menu bar, and then press <Enter> to get into the sub screen.

- 19

3.1.2 Navigation Keys

Please check the following table for the function description of each navigation key.

Function Description
Moves cursor left or right to select Screens
Moves cursor up or down to select items
To change option for the selected items
To bring up the selected screen
To display the General Help Screen
To load optimal default values for all the settings
To save changes and exit the BIOS SETUP UTILITY
To jump to the Exit Screen or exit the current screen

3.2 Main Screen

When you enter the BIOS SETUP UTILITY, the Main screen will appear and display the system overview.

Gaia404 (A330GC-H4) / Gaia408 (A330GC-H8)

Moin Smar	BIC t Advanced	S SETUP UTII	LITY Boot	Security	Exit
Main Onai	t Autaneeu		DOOL	J	EAR
System Overview	7			Use [Er	ter], [TAB]
System Time System Date		[14:00:09] [Mon 08/03/2009	1	select a	field.
BIOS Version Processor Type	: Gaia408 P1 : Intel (R) At	.00 om (TM) CPU 33	0 @	Use [+] configu	or [-] to re system Time.
Processor Speed Microcode Update Cache Size	: 1600MHz : 1600MHz : 106C2/20D : 1024KB	(DIT)			Select Screen Select Item
Total Memory DDRII1 DDRII2	: 2048MB wi Dual-Chann : 1048MB/260 : 1048MB/260	h 8MB shared n el Memory Mode MHz (DDRII533 MHz (DDRII533	iemory e))	+- 0 Tab 5 F1 0 F9 1 F10	Change Field Select Field General Help Load Defaults Save and Exit
				ESC	Exit
v02.54(0	") Convright 1	985-2005, Amer	ican M	egatrends.	Inc.

System Time [Hour:Minute:Second]

Use this item to specify the system time. System Date [Day Month/Date/Year]

Use this item to specify the system date.

Main Smart	Advanced H/W Monitor Boot	Security Exit
System Overview		Use [Enter], [TAB]
System Time System Date	[14:00:09] [Mon 08/03/2009]	or [SHIF1-TAB] to select a field.
		Use [+] or [-] to
BIOS Version	: Gaia416 P1.00	configure system Time
Processor Type	: Intel (R) Atom (TM) CPU 330 @ 1.60GHz (64bit)	
Processor Speed	: 1600MHz	
Microcode Undate	: 106C2/20D	
Cache Size	: 1024KB	Select Screen
		Select Item
Total Memory	· 2048MB with 8MB shared memory	+- Change Field
rotur memory	Dual-Channel Memory Mode	Tab Select Field
DDRII1	· 1024MB/266MHz (DDR11533)	FI General Help
DDDDI12	1024MD/266MHz (DDR11553)	F9 Load Defaults
DDKI12	. 102401B/20001112 (DDR11555)	F10 Save and Exit
		ESC Exit

Gaia416-60 (A330GC-H16-60) / Gaia416-120 (A330GC-H16-120)

System Time [Hour:Minute:Second]

Use this item to specify the system time.

System Date [Day Month/Date/Year]

Use this item to specify the system date.

3.3 Smart Screen

In the Smart screen, you can load the BIOS setup according to your requirements.

		E	BIOS SETUP UT	ILITY		
Main	Smart	Advanced	H/W Monitor	Boot	Security	Exit
Smart	Settings				Exit system after savin	m setup 1g the
Save C Load B	hanges ai IOS Defa	nd Exit ults			changes. F10 key ca for this op	an be used beration.
BIOS	Update U k Instant	tility Flash			Sel ↑↓ Sel Enter Go F1 Ger F9 Loz F10 Sav ESC Exi	ect Screen ect Item to Sub Screen neral Help nd Defaults re and Exit it
	v02.54	(C) Copyrigh	t 1985-2005, Am	erican N	Aegatrends,	Inc.

Save Changes and Exit

When you select this option, it will pop-out the following message, "Save configuration changes and exit setup?" Select [OK] to save the changes and exit the BIOS SETUP UTILITY.

Load BIOS Defaults

Load BIOS default values for all the setup questions. F9 key can be used for this operation.

- 21

ASRock Instant Flash

ASRock Instant Flash is a BIOS flash utility embedded in Flash ROM. This convenient BIOS update tool allows you to update system BIOS without entering operating systems first like MS-DOS or Windows[®]. Just launch this tool and save the new BIOS file to your USB flash drive, floppy disk or hard drive, then you can update your BIOS only in a few clicks without preparing an additional floppy diskette or other complicated flash utility. Please be noted that the USB flash drive or hard drive must use FAT32/16/ 12 file system. If you execute ASRock Instant Flash utility, the utility will show the BIOS files and their respective information. Select the proper BIOS file to update your BIOS, and reboot your system after BIOS update process completes.

3.4 Advanced Screen

In this section, you may set the configurations for the following items: CPU Configuration, Chipset Configuration, ACPI Configuration, Storage Configuration, Super IO Configuration, and USB Configuration.

		E	SIOS SETUP UT	ILITY		
Main	Smart	Advanced	H/W Monitor	Boot	Security	• Exit
Advanc	ed Setti	ngs			Configu	re CPU.
 CPU (Chipse ACPI Storag Superl USB (Configur: et Configur Configur e Config IO Confi Configur:	ation guration ration guration guration ation				
					†† Enter F1 F9 F10 ESC	Select Screen Select Item Go to Sub Screen General Help Load Defaults Save and Exit Exit
	v02.54 (C) Copyrigh	t 1985-2005, Am	erican N	legatrend	s, Inc.

Setting wrong values in this section may cause the system to malfunction.



3.4.1 CPU Configuration

BI	OS SETUP UTILITY	
Advanced		
CPU Configuration		Enable the processor to reduce it's power
Ratio Actual Value CPU Thermal Throttling No-Excute Memory Protection Hyper Threading Technology	12 [Enabled] [Disabled] [Enabled]	consumption in order to operate within predetermined temperature limits.
		Select Screen 11 Select Item +- Change Option F1 General Help F9 Load Defaults F10 Save and Exit ESC Exit
v02.54 (C) Copyright	1985-2005, American M	legatrends, Inc.

Ratio Actual Value

This is a read-only item, which displays the ratio actual value of this motherboard.

CPU Thermal Throttling

You may select [Enabled] to enable P4 CPU internal thermal control mechanism to keep the CPU from overheated.

No-Execute Memory Protection

No-Execution (NX) Memory Protection Technology is an enhancement to the IA-32 Intel Architecture. An IA-32 processor with "No Execute (NX) Memory Protection" can prevent data pages from being used by malicious software to execute code.

Hyper Threading Technology

To enable this feature, it requires a computer system with an Intel Pentium[®] 4 processor that supports Hyper-Threading technology and an operating system that includes optimization for this technology, such as Microsoft[®] Windows[®] XP. Set to [Enabled] if using Microsoft[®] Windows[®] XP, or Linux kernel version 2.4.18 or higher.

- 23

3.4.2 Chipset Configuration

BIOS S	ETUP UTILITY		
Advanced			
Chipset Configuration	Chipset Configuration		CAS# Latency
Internal Graphics Mode Select DVMT Mode Select DVMT/FIXED Memory Onboard HD Audio OnBoard Lan 1 OnBoard Lan 2	[Auto] [DVMT Mode] [Maximum DVMT] [Enabled] [Enabled] [Enabled]	Timing	
		++ +- F1 F9 F10 ESC	Select Screen Select Item Change Option General Help Load Defaults Save and Exit Exit
v02.54 (C) Copyright 1985-	2005, American Mega	trends, I	nc.

Internal Graphics Mode Select

If you select [Auto], the onboard VGA will be automatically disabled when you install VGA card; the onboard VGA will be enabled without the installation of any add-on VGA card. If you select [Enabled, 8MB] or [Enabled, 1MB], the onboard VGA will be enabled.

DVMT Mode Select

Use this option to adjust DVMT mode. Configuration options: [Fixed Mode], [DVMT Mode] and [Fixed+DVMT Mode]. The default value is [DVMT Mode]. DVMT (Dynamic Video Memory Technology) is an architecture that offers breakthrough performance for the motherboard through efficient memory utilization. In Fixed mode, a fixed-size fragment of the system memory is allocated to the graphics core. In DVMT mode, the graphics driver allocates memory as needed for running graphics applications and is cooperatively using this memory with other system components. In Fixed+DVMT mode, the graphics processor gets a fixed-size chunk of 64MB of memory and up to 64MB of dynamically-allotted memory. This mode guarantees that at least 64MB of memory is available to the graphics core, with a possibility to increase this amount to 128MB, if necessary. This item will not be used under Windows[®] Vista[™] OS because the driver will intelligently detect physical memory available and allocate necessary video memory.

DVMT/FIXED Memory

You are allowed to adjust the shared memory size in this item if you set DVMT Mode Select as [DVMT Mode]. Configuration options: [64MB], [128MB] and [Maximum DVMT].

Onboard HD Audio

Select [Enabled] or [Disabled] for the onboard HD Audio feature.

OnBoard Lan 1

This allows you to enable or disable the "OnBoard Lan 1" feature. OnBoard Lan 2

This allows you to enable or disable the "OnBoard Lan 2" feature.

3.4.3 ACPI Configuration

	BIOS SETUP UTILITY	
Advanced		
ACPI Configuration Restore on AC/ Power Loss Ring-In Power On PCI Devices Power On RTC Alarm Power On ACPI HPET Table	(Power Off) (Disabled) (Disabled) (Disabled) (Disabled)	Set the power state after an unexpected AC/Power loss. Select Screen 11 Select Item +- Change Option F1 General Help F9 Load Defaults F10 Save and Exit ESC Exit

Restore on AC/Power Loss

This allows you to set the power state after an unexpected AC/ Power loss. If [Power Off] is selected, the AC/ Power remains off when the power recovers. If [Power On] is selected, the AC/ Power resumes and the system starts to boot up when the power recovers. User can enable "Re store AC/ power off." The default value is [Power Off].

Ring-In Power On

Use this item to enable or disable Ring-In signals to turn on the system from the power-soft-off mode.

PCI Devices Power On

Use this item to enable or disable PCI devices to turn on the system from the power-soft-off mode.

RTC Alarm Power On

Use this item to enable or disable RTC (Real Time Clock) to power on the system.

ACPI HPET Table

Use this item to enable or disable ACPI HPET Table. The default value is [Disabled]. Please set this option to [Enabled] if you plan to use this motherboard to submit Windows[®] Vista[™] certification.

3.4.4 Storage Configuration

	BIOS SETUP UTILITY	<u>,</u>
Advanced		
Storage Configuration		Set [Compatible] when Legacy OS
ATA/IDE Configuration	[Enhanced] [Not Detected]	(MS-DOS, Win NT) device is used. Set [Enhanced] when Native OS
SATAII_2 SATAII_3 SATAII_4 IDE1 Master IDE1 Slave	[Not Detected] [Not Detected] [Not Detected] [Not Detected] [Not Detected]	(Win2000 / XP) is used.

ATA/IDE Configuration

Please select [**Compatible**] when you install legacy OS (Windows[®] NT). If native OS (Windows[®] 2000 / XP / Vista[™]) is installed, please select [**Enhanced**].

IDE Device Configuration

You may set the IDE configuration for the device that you specify. We will use the "Primary IDE Master" as the example in the following instruction.



TYPE

Use this item to configure the type of the IDE device that you specify. Configuration options: [Not Installed], [Auto], [CD/DVD], and [ARMD]. [Not Installed]: Select [Not Installed] to disable the use of IDE device. [Auto]: Select [Auto] to automatically detect the hard disk drive.



After selecting the hard dissk information into BIOS, use a disk utility, such as FDISK, to partition and format the new IDE hard disk drives. This is necessary for write or read data from the hard Make sure to set the partition of the Primary IDE hard disk drives to active.

LBA/Large Mode

Use this item to select the LBA/Large mode for a hard disk > 512 MB under DOS and Windows; for Netware and UNIX user, select [Disabled] to disable the LBA/Large mode.

Block (Multi-Sector Transfer)

The default value of this item is [Auto]. If this feature is enabled, it will enhance hard disk performance by reading or writing more data during each transfer.

PIO Mode

Use this item to set the PIO mode to enhance hard disk performance by optimizing the hard disk timing.

DMA Mode

DMA capability allows the improved transfer-speed and data-integrity for compatible IDE devices.

S.M.A.R.T.

Use this item to enable or disable the S.M.A.R.T. (Self-Monitoring, Analysis, and Reporting Technology) feature. Configuration options: [Disabled], [Auto], [Enabled].

32-Bit Data Transfer

Use this item to enable 32-bit access to maximize the IDE hard disk data transfer rate.

3.4.5 Super IO Configuration

Configure Super IO Chipset		Allow BIOS to Select
		Addresses.
		Select Screen 14 Select Item +- Change Option F1 General Help

Serial Port Address

Use this item to set the address for the onboard serial port or disable it. Configuration options: [Disabled], [3F8 / IRQ4], [2F8 / IRQ3], [3E8 / IRQ4], [2E8 / IRQ3].

3.4.6 USB Configuration

	BIOS SETUP UTILITY	
Advanced		
USB Configuration USB Controller USB 2.0 Support Legacy USB Support	(Enabled) (Enabled) (Enabled)	To enable or disable the onboard USB controllers.
v02.54 (C) Copyr	ight 1985-2005, American M	legatrends, Inc.

USB Controller

Use this item to enable or disable the use of USB controller. **USB 2.0 Support**

Use this item to enable or disable the USB 2.0 support.

Legacy USB Support

Use this option to select legacy support for USB devices. There are four configuration options: [Enabled], [Auto], [Disabled] and [BIOS Setup Only]. The default value is [Enabled]. Please refer to below descriptions for the details of these four options:

[Enabled] - Enables support for legacy USB.

[Auto] - Enables legacy support if USB devices are connected.

[Disabled] - USB devices are not allowed to use under legacy OS and BIOS setup when [Disabled] is selected. If you have USB compatibility issue, it is recommended to select [Disabled] to enter OS.

[BIOS Setup Only] - USB devices are allowed to use only under BIOS setup and Windows / Linux OS.

3.5 Hardware Health Event Monitoring Screen

In this section, it allows you to monitor the status of the hardware on your system, including the parameters of the CPU temperature, motherboard temperature, CPU fan speed, chassis fan speed, and the critical voltage.

BIOS SETUP UTILITY	Security Exit
Monitoring	Fan configuration mode setting
: 34°C / 93°F : 31°C / 87°F	
: 4218 RPM : 2721 RPM	
: 1.208V : 3.328V : 4.848V	sa Salaat Saraan
: 12.460V	↑↓ Select Item F1 General Help
	F10 Save and Exit ESC Exit
	BIOS SETUP UTILITY ed H/W Monitor Boot Monitoring

System Fan Setting

The system fan improves the air circulation of the computer's enclosure. Use this option to adjust the fan speed. The default value is [Full On]. Configuration options: [Full On], [Manual]. Manual allow user to set Target Fan Speed from level 1-9

3.6 Boot Screen

In this section, it will display the available devices on your system for you to configure the boot settings and the boot priority.



3.6.1 Boot Settings Configuration



Boot From Onboard LAN

Use this item to enable or disable the Boot From Onboard LAN feature.

Boot up Num-Lock

Use this item to turn on or off the numeric keypad feature.



3.7 Security Screen

In this section, you may set or change the supervisor/user password for the system. For the user password, you may also clear it.



3.8 Exit Screen



Save Changes and Exit

When you select this option, it will pop-out the following message, "Save configuration changes and exit setup?" Select [OK] to save the changes and exit the BIOS SETUP UTILITY.

Discard Changes and Exit

When you select this option, it will pop-out the following message, "Discard changes and exit setup?" Select [OK] to exit the BIOS SETUP UTILITY without saving any changes.

- 31

Discard Changes

When you select this option, it will pop-out the following message, "Discard changes?" Select [OK] to discard all changes.

Would you like to save current setting user defaults?

In this option, you are allowed to load and save three user defaults according to your own requirements.

Chapter 4 Software Support

4.1 Install Operating System

This motherboard supports various Microsoft[®] Windows[®] operating systems: XP / Vista[™]. Because motherboard settings and hardware options vary, use the setup procedures in this chapter for general reference only. Refer to your OS documentation for more information.

4.2 Support CD Information

The Support CD that came with the motherboard contains necessary drivers and useful utilities that enhance the motherboard features.

4.2.1 Running The Support CD

To begin using the support CD, insert the CD into your CD-ROM drive. The CD automatically displays the Main Menu if "AUTORUN" is enabled in your computer. If the Main Menu did not appear automatically, locate and double click on the file "ASSETUP.EXE" from the BIN folder in the Support CD to display the menus.

4.2.2 Drivers Menu

The Drivers Menu shows the available devices drivers if the system detects installed devices. Please install the necessary drivers to activate the devices.

4.2.3 Utilities Menu

The Utilities Menu shows the applications software that the motherboard supports. Click on a specific item then follow the installation wizard to install it.

4.2.4 Contact Information

If you need to contact huperLab or want to know more about huperLab, welcome to visit huperLab's website at <u>http://www.huperlab.com</u>; or you may contact your dealer for further information.

Chapter 5 huperVision Software Installation

5.1 Easy Steps to install software

Follow the steps 1-7 to install huperVision.

1. Insert huperVision installation CD. Auto Run will start up as below.



 Press [Install huperVision] button to start huperVision installation program. Then select installation language from Setup Language dialog and press [OK] button to begin installation.

Choose 9	ietup Language
Z	Select the language for this installation from the choices below.
	English (United States)
	OK Cancel

Start installion, press [Next] to continue.



3. Please choose [I accept the terms in the license agreement] and then press [Next] to continue.



4. Choose destination folder. The default path for installation is C:\Program Files\huperVision\. Press [Change...] if you want to install to another folder. Press [Next] to continue if the destination folder is confirmed.



5. Select Capture Card Driver. Please select 16ch version for Gaia 404 / Gaia 408 / Gaia 416. Then choose correct Video standard (NTSC/PAL) and press [Next] to continue.

C umo
(• NISC
C PAL

- 35

6. Press **[Install]** to start installing program & capture card driver. Press [Back] if you want to change installation options.



7. Press **[Finish]** to end installation. You may probably need a reboot to initial huperVision site server program.



5.2 Start Recording Instruction

Follow the steps below to start recording.

1. Manually reboot after installation, huperVision site server program is launching with a pop-up warning message to notify that you have not assigned a recording path.





3. Press the [Add...] button to add a new folder to store your recording data files. Preferences

ieneral Camera View Device	Schedule Audio Ne	etwork User	
Site name: Local Site		Allow remote access	
Storage for surveillance video re	cordings:		
No Location	Allocated Re	Used Record Free Record	Associat
1 D:\Data	210.0G	209.3G 0.7G	1, 2, 3, 4
<)	>
Add Delete	Modify	Allocated Record Space:	210.0G
		Used Record Space:	209.3G
✓ Auto-recycle	Settings	Free Record Space:	0.7G
🗌 Storage Failure Notification	Setting		

4. Press [Browser...] button in the Add Storage dialog box.

Add Storage			
Location:			Browse
Disk capacity:	0	GB	\smile
Free disk space :	0	GB	
Allocated record space:	0 •	GB	

- 37

 Set storage location in existed folder or create new folder. To create new folder, select a drive or folder then press[Make New Folder]. Select target location and press [OK] to set storage path.

Browse For Folder	? 🛛
Please select a folder.	
😑 🥪 Local Disk (D:)	~
🗉 🧰 Computex	
New Folder	
Ghost	
Removable Disk (E:)	
	~
Folder: Data	
Make New Folder	Cancel

6. After setting storage location, press[OK] button to save.

Location: C:\	Documents and Set	ttings\1234\My Dbcu	Browse
Disk capacity:		7 GB	
Free disk space:		0 GB	
Allocated record s	pace: [0 🕂 GB	
Cameras:			
🔽 Camera 1	🔽 Camera 2	🔽 Camera 3	🔽 Camera 4
🔽 Camera 5	🔽 Camera 6	🔽 Camera 7	🔽 Camera 8
🔽 Camera 9	🔽 Camera 10	🔽 Camera 11	🔽 Camera 12
🔽 Camera 13	🔽 Camera 14	🔽 Camera 15	🔽 Camera 16
	Select All	Clear	All
Warning: Allocate capacity	d record space mus	st not be greater tha	in the hard disk

Note:

Please keep the all 16 cameras be checked even if you don't have that much cameras. Please also do NOT change the allocated record space value by its automatic decision.

7. After create the folder, press the [OK] button of the Preference page to finish settings.

Storana for e rvaillance vide	o recordinge		
No Location	Allocated Re	Used Record Free Record	Associat
1 C:\Data	3.0G	0.0G 3.0G	1, 2, 3,
<			>
Add Delete	Modify	Allocated Record Space:	3.0G
		Used Record Space:	0.0G
Auto-recycle	Settings	Eree Record Space:	3.0G
Storage Failure Notificatio	n Setting]	
Always display original vide	o resolution	Reports Dat	e & Time
Auto-restart machine after		Settings	
Auto Windows Login		Settings	
Ĩ.		coungem	
emp folder:			
C:\DOCUME~1\1234\LOCALS	~1\Temp\	Browse	

8. The **R** LED turns green at upper right side, indicates that available channels are recording now.



- 39

5.3 Playback Recordings Instruction

Follow the steps 1-7 to start recording.

1. Launch the huperVision Record Player program by clicking the icon



2. Record Player pop up as below while site server still working in the background.



3. Select playback channel from camera list or All Cameras.



4. Select a time mark from list to load video records.



5. After loading (running progress bar) video, press Play button to start playing selected recordings.



6. Repeat from Step3 to Step5 if want to playback different channel.

7. Press [Power off]

button to exit Record Player and back to site server.

Note:

Press this Power off button will NOT close the running huperVision site server. There is also a protection for accident press the huperVision site server power button, a confirm dialog box will pop up before shutting down huperVision site server main program.

Now you are ready to use huperVision IVS system, for more operation guide on Intelligent Video Functions, please refer to full Users Manual.

To find User's Manual, insert installation CD and press [Document] >> [User's Manual] in auto-run panel.



The Acrobat Reader program is included in the Installation CD under \English\Doc\aar.exe

- 41