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# Safety information

# **Electrical safety**

- To prevent electrical shock hazard, disconnect the power cable from the electrical outlet before relocating the system.
- When adding or removing devices to or from the system, ensure that the power cables for the devices are unplugged before the signal cables are connected. If possible, disconnect all power cables from the existing system before you add a device.
- Before connecting or removing signal cables from the motherboard, ensure that all power cables are unplugged.
- Seek professional assistance before using an adapter or extension cord. These devices could interrupt the grounding circuit.
- Make sure that your power supply is set to the correct voltage in your area.
- If you are not sure about the voltage of the electrical outlet you are using, contact your local power company.
- If the power supply is broken, do not try to fix it by yourself. Contact a qualified service technician or your retailer.

# **Operation safety**

- Before installing the motherboard and adding devices on it, carefully read all the manuals that came with the package.
- Before using the product, make sure all cables are correctly connected and the power cables are not damaged. If you detect any damage, contact your dealer immediately.
- To avoid short circuits, keep paper clips, screws, and staples away from connectors, slots, sockets and circuitry.
- Avoid dust, humidity, and temperature extremes. Do not place the product in any area where it may become wet.
- Place the product on a stable surface.
- If you encounter technical problems with the product, contact a qualified service technician or your retailer.



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### **Revision History**

Revision	Date (dd.mm.yyyy)	Changes	
Version 1.0	27, Dec, 2011	Initial release	

# **Packing list**

- 1 x OXY5413A
- 1 x Driver CD
- 1 x Quick Installation Guide
- 1 x User's Manual
- 1 x Dual RJ-45 connector adaptor card (optional)
- 1 x Cable Kit (optional)
  - 1 x ATX power cable
  - 1 x RS-232 cable
  - 1 x VGA cable
  - 1 x USB cable



If any of the above items is damaged or missing, contact your retailer.



# **Chapter 1 Product Information**

# 1.1 Block Diagram





# 1.2 Key Features

System	
CPU Type	Intel® Atom™ D525 CPU onboard
Chipset	ICH8M
Memory Type	Built-in DDR3 800 204 pin SO-DIMM
	(Max density is 2GB)
BIOS	AMI® BIOS
Super I/O	SMSC SCH3112
Watchdog Timer	1-255 sec. or 1-255 min. software programmable and
	can be generate system reset
Expansion Slot	
Expansion Interface	1 x PCI-104, 1 x PC/104
Display	
Chipset	Integrated Intel® GMA3150 GFX Render Core
Onboard VGA	Yes (Max resolution is 2048x1536@60Hz)
LVDS	18-bit LVDS (Max resolution is 1366x768)
Dual Displays	VGA+LVDS
Capability	
Audio	
Codec	Integrated High Definition Audio (Realtek ALC269)
Ethernet	
Chipset	Realtek® RTL8111DL
Internal I/O	
VGA Port	2x8 pin header
SATA port	1 x SATA Port
USB Port	4 by 2x5 pin connector
COM port	2 by 2x5 pin connector
LAN Port	2x15 pin header
Front Panel	2x5 pin header, 2.54mm pitch
connector	
Fan Connector	CPU Fan connector (1x4 pin) and System Fan
	connector (1x3 pin)
Mechanical and Env	vironment
Form Factor	PC/104+ Module
Power Type	+5V/12V DC in
Dimension	96mm (W) x 116mm (L)
Operating Temp.	-20°C ~ +70°C
Storage Temp.	-20°C ~ +85°C
Relative humidity	10% ~ 97% (operating, non-condensing)
	5% ~ 97% (non-operating, non-condensing)

\*All specifications and photos are subject to change without notice\*



# **1.3 Board Placement**



PC/104 Connector



# **Chapter 2 Jumpers and Connectors**

# 2.1 Jumpers



Jumper	Jumper Setting
JP1	LCD Power Select. (1-2: +3.3V ; 2-3: +5V)
JP2	PCI VIO Voltage Select (1-2: +5V ; 2-3: +3.3V)
JP3	WDT Function Select. (1-2: IRQ11 ; 2-3: Reset)
JP4	Clear CMOS (1-2: Hold CMOS; 2-3: Clear CMOS)
JP5	AT & ATX MODE SELECT (1-2:AT MODE ; 2-3: ATX MODE)
JP6	COM2 MODE SELECT (1-2: RS232 ; 3-4: RS485 4-Wire ; 5-6: RS485 2-Wire)
JP7	PSON# Signal Souce Select. (1-2: ICH8M ; 2-3: SIO)



# **2.2 Connectors**



### **CN1: VGA Connector (Pin Header)**

Pin	Signal	Pin	Signal	2	16
1	RED	2	GREEN		
3	BLUE	4	+5V	0.0.0	0.0.0.0.0.
5	GND	6	GND		0.0.0.0
7	GND	8	GND	1	15
9	+5V	10	GND		
11	+5V	12	DDC Data		
13	H-SYNC	14	V-SYNC		
15	DDC Clock	16	NC		



### **CN2: LVDS Connector**

Pin	Define	Pin	Define	<sup>1</sup> 000000000 19
1	LVDS_D0+	2	LVDS_D0-	
3	GND	4	GND	
5	LVDS_D1+	6	LVDS_D1-	2 000000000 20
7	GND	8	PANEL POWER	
9	LVDS_D2+	10	LVDS_D2-	
11	LVDS_CLK+	12	LVDS_CLK-	
13	GND	14	GND	
15	NC	16	NC	
17	LVDS_BKTEN	18	PANEL POWER	
19	LVDS_SDA	20	LVDS_SCL	

### **CN3: AT POWER Connector**

Pin	Define	Pin	Define	4
1	+5V	2	+5V	
3	GND	4	GND	Č I
				1

### **CN4: AUX POWER Connecotr**

Pin	Define	Pin	Define	2 1
1	GND	2	+12V	
				1001

### **CN5: Flat Panel Inverter Connector**

Pin	Assignment	<b>5</b>
1	+12V	õ
2	GND	l
3	FPBKLEN	
4	VR	<b>1</b>
5	+5V	•

### **CN6: ATX POWER Connector**

Pin	Define	Pin	Define	
1	+5Vstby	2	+5Vstby	0 1
3	GND		PSON#	$\otimes$
				⊚
				◎     4



CN7: PCI-104 Connector								
Signal	Pin	Signal	Pin	Signal	Pin	Signal	Pin	D30 C30 B30 A30
GND	A1	NC	B1	+5V	C1	AD00	D1	0:0:0:0
VIO	A2	AD02	B2	AD01	C2	+5V	D2	0000
AD05	A3	GND	B3	AD04	C3	AD03	D3	0000
C/BE0#	A4	AD07	B4	GND	C4	AD06	D4	0000
GND	A5	AD09	B5	AD08	C5	GND	D5	0000
AD11	A6	VIO	B6	AD10	C6	M66EN	D6	ŏŏŏŏŏ
AD14	A7	AD13	B7	GND	C7	AD12	D7	0000
+3.3V	A8	C/BE1#	B8	AD15	C8	+3.3V	D8	0000
SERR#	A9	GND	B9	SBO#	C9	PAR	D9	0000
GND	A10	PERR#	B10	+3.3V	C10	SDONE	D10	0000
STOP#	A11	+3.3V	B11	LOCK#	C11	GND	D11	0000
+3.3V	A12	TRDY#	B12	GND	C12	DEVSEL#	D12	0000
FRAME#	A13	GND	B13	IRDY#	C13	+3.3V	D13	0000
GND	A14	AD16	B14	+3.3V	C14	C/BE2#	D14	0000
AD18	A15	+3.3V	B15	AD17	C15	GND	D15	0000
AD21	A16	AD20	B16	GND	C16	AD19	D16	00000
+3.3V	A17	AD23	B17	AD22	C17	+3.3V	D17	0000
IDSEL0	A18	GND	B18	IDSEL1	C18	IDSEL2	D18	0000
AD24	A19	C/BE3#	B19	VIO	C19	IDSEL3	D19	0000
GND	A20	AD26	B20	AD25	C20	GND	D20	D1 C1 B1 A1
AD29	A21	+5V	B21	AD28	C21	AD27	D21	DICIDIAI
+5V	A22	AD30	B22	GND	C22	AD31	D22	
REQ0#	A23	GND	B23	REQ1#	C23	VIO	D23	
GND	A24	REQ2#	B24	+5V	C24	GNT0#	D24	
GNT1#	A25	VIO	B25	GNT2#	C25	GND	D25	
+5V	A26	CLK0	B26	GND	C26	CLK1	D26	
CLK2	A27	+5V	B27	CLK3	C27	GND	D27	
Ground	A28	INTD#	B28	+5V	C28	RST#	D28	
+12V	A29	INTA#	B29	INTB#	C29	INTC#	D29	
-12V	A30	REQ3#	B30	GNT3#	C30	GND	D30	

### **CN8: Auxiliary Power Connector**

Pin	Assignment	1	$\square$	1
1	-5V		$\otimes$	4
2	GND			
3	Key pin		$\odot$	
4	-12V		$\odot$	1



# CN9: Power LED /HDD LED/Reset/Speak Out Connector

Pin	Assignment		$\square$	8
1	Power LED+		$\mathbb{Y}$	0
2	Power LED-		$\odot$	
3	HDD LED+		$\odot$	
4	HDD LED-		$\bigcirc$	
5	Reset +		ă	
6	Reset -		$\mathbb{Q}$	
7	Speak Out+		$\odot$	
8	Speak Out-		$\odot$	
			$\odot$	1

### CN10: ATX Power Control Connector

٢	Assignment		-
I	PANSW-	$\odot$	2
I	PANSW+	$\overline{a}$	
		$\odot$	1

### **CN12: FAN Connector**

Pin	Define	Pin	Define	Г		-
1	+5V	2	GND	h	$\odot$	2
				Ľ	$\bigcirc$	1

### **CN13: GPIO Connector**

Pin	Assignment	$\bigcirc$	10
1	+3.3V	$\mathbb{Q}$	10
2	GPIO0	$\odot$	
3	GPIO1	ര	
4	GPIO2		
5	GPIO3	$\odot$	
6	GPIO4	$\bigcirc$	
7	GPIO5	Ä	
8	GPIO6	$\odot$	
9	GPIO7	$\bigcirc$	
10	GND	Ô	
		$\bigcirc$	
		$\bigcirc$	1



### CN14, CN15: USB1/2, USB3/4 Connector (Pin Header)

Pin	Assignment	Pin	Assignment	2 ^ ^ ^ ^ 10
1	+5V	2	+5V	[U-U-U-U-U]
3	Data0-	4	Data1-	0.0.0.0
5	Data0+	6	Data1+	10000 9
7	GND	8	GND	•
9	Key Pin	10	GND	

### CN16: COM2 -RS422/RS485 Connector (Pin Header)

Pin	Assignment	6	60
1	485RXD-	88	
2	485RXD+	1	4
3	485TXD+		
4	485TXD-		

### CN18: CN17: COM1, COM2 RS-232 Pin-Header

Pin	Assignment	Pin	Assignment	2 10
1	DCD	2	DSR	00000
2	RXD	4	RTS	<b>∎</b>   -  -  -  -  1
3	TXD	6	CTS	
4	DTR	8	RI	
5	GND	10	NC	00000
				1 9

### CN19: LAN1, LAN2 Interface

Pin	Signal	Pin	Signal	30 2
1	LAN1-D2+	2	LAN1-D0+	
3	LAN1-D2-	4	LAN1-D0-	
5	LAN1-D3+	6	LAN1-D1+	
7	LAN1-D3-	8	LAN1-D1-	
9	+3.3V	10	GND	29 1
11	LAN1-ACT	12	LAN1-LINK	-
13	LAN1_LINK100	14	LAN1-LINK1000	
15	GND	16	GND	
17	LAN2-D0+	18	LAN2-D2+	
19	LAN2-D0-	20	LAN2-D2-	
21	LAN2-D1+	22	LAN2-D3+	
23	LAN2-D1-	24	LAN2-D3-	
25	LAN2-ACT	26	LAN2-LINK	
27	LAN2_LINK100	28	LAN2-LINK1000	
29	GND	30	GND	



### **CN20: SATA Connector**

Pin	Signal Name	
1	GND	ァ∭┓╖╢
2	TX+	
3	TX-	
4	GND	
5	RX-	`  <b>\_</b> _&''
6	RX+	
7	GND	

### **CN21: Audio Interface**

Pin	Assignment	Pin	Assignment	2 12
1	+5V	2	GND	
3	GND	4	CLKBIT	
5	+3.3V	6	Key Pin	
7	SDTAIN	8	SYNC	1 11
9	GND	10	PRST#	
11	SDATAOUT	12	NC	

### CN22: CFAST

Signal	segment	Power segment		
Pin	Name	Pin	Name	
S1	GND	PC1	CDI	11/ 77
S2	A+	PC2	GND	
S3	A-	PC3	TBD	SI Provinger provinger
S4	GND	PC4	TBD	S7
S5	B-	PC5	TBD	PC I
S6	B+	PC6	TBD	PC I 7
S7	GND	PC7	GND	
		PC8*	LED1	
		PC9*	LED2	
		PC10	IO1	
		PC11	IO2	
		PC12	103	
		PC13	PWR	
		PC14	PWR	
		PC15	PGND	
		PC16	PGND	
		PC17	CDO	

\*Refer above for LED output design guide



### CN23: PC/104 Connector

Signal	Pin	Signal	Pin	Signal	Pin	Signal	Pin	Al
GND	C0	GND	D0	IOCHCHK	A1	GND	B1	
SBHE*	C1	MEMCS16*	D1	SD7	A2	RESET	B2	00
LA23	C2	IOSC16*	D2	SD6	A3	+5V	B3	8800
LA22	C3	IRQ10	D3	SD5	A4	IRQ9	B4	0000
LA21	C4	IRQ11	D4	SD4	A5	-5V	B5	
LA20	C5	IRQ12	D5	SD3	A6	NC	B6	
LA19	C6	IRQ15	D6	SD2	A7	-12V	B7	
LA18	C7	IRQ14	D7	SD1	A8	0 wait state	B8	
LA17	C8	NC	D8	SD0	A9	+12V	B9	
MEMR*	C9	NC	D9	IOCHRDY	A10	NC	B10	0000
MEMW*	C10	NC	D10	AEN	A11	SMEMW#	B11	
SD8	C11	NC	D11	SA19	A12	SMEMR*	B12	
SD9	C12	NC	D12	SA18	A13	IOW*	B13	
SD10	C13	NC	D13	SA17	A14	IOR*	B14	B32 A32
SD11	C14	NC	D14	SA16	A15	NC	B15	
SD12	C15	NC	D15	SA15	A16	NC	B16	
SD13	C16	+5V	D16	SA14	A17	NC	B17	
SD14	C17	MASTER*	D17	SA13	A18	NC	B18	
SD15	C18	GND	D18	SA12	A19	REFRESH*	B19	
NC	C19	GND	D19	SA11	A20	SYSCLK	B20	
				SA10	A21	IRQ7	B21	
				SA9	A22	IRQ6	B22	
				SA8	A23	IRQ5	B23	
				SA7	A24	IRQ4	B24	
				SA6	A25	IRQ3	B25	
				SA5	A26	NC	B26	
				SA4	A27	TC	B27	
				SA3	A28	BALE	B28	
				SA2	A29	+5V	B29	
				SA1	A30	OSC	B30	
				SA0	A31	GND	B31	
				GND	A32	GND	B32	



# **Chapter 3 BIOS Setup**

# 3.1 Entering the CMOS Setup Program

Use the CMOS Setup program to modify the system parameters to reflect the options installed in your system and to customize your system. For example, you should run the Setup program after you:

- 1. Received an error code at startup
- 2.Install another disk drive
- 3.Use your system after not having used it for a long time
- 4. Find the original setup missing
- 5.Replace the battery
- 6. Change to a different type of CPU
- 7.Run the Flash program to update the system BIOS
- Run the CMOS Setup program after you turn on the system. On-screen instructions explain how to use the program.

### Enter the CMOS Setup program's main menu as follows:

- 1. Turn on or reboot the system. After the BIOS performs a series of diagnostic checks, the following message appears:
- "Press DEL to enter SETUP"
- 2. Press the <DEL> key to enter CMOS Setup program. The main menu appears:

			BIOS SE	TUP UTILITY		
Main	Advanced	PCIPnP	Boot	Security	Chipset	Exit
System	Overview				Use	(ENTER), (TAB) SHIFT-TABL to
AMIBIO Version Build 1 ID	<b>S</b> n :08.00.1 Date:11/30/1 :0XY54136	6 1 1001			Use conf	ct a field. [+] or [-] to igure system Time
Process Intel (	sor R) Atom(TM)	CPU D525	P 1.80G	Hz		
Speed Count	:1800MHz :1					
Speed Count System Size	:1800MHz :1 Memory :4086MB		_		e 14	Select Screen Select Item Change Field



3. Choose a setup option with the arrow keys and press <Enter>. See the following sections for a brief description of each setup option.

AMIBIOS: Displays the auto-detected BIOS information.
Processor: Displays the auto-detected CPU specification.
System Memory: Displays the auto-detected system memory.
SystemTime: [hour:min:sec]
This item allows you to set the system time.
System Date: [Day mm/dd/yyyy]
This item allows you to set the system date.

In the main menu, press F10 ("Save Changes and Exit") to save your changes and reboot the system. Choosing "Discard Changes and Exit" ignores your changes and exits the program. Pressing <ESC> anywhere in the program returns you to the main menu.



### 3.2 Menu Options

The main menu options of the CMOS Setup program are described in the following and the following sections of this chapter.

Main: For changing the basic system configurations.

Advanced: For changing the advanced system settings.

**PCIPnP:** For changing the advanced PCI/PnP Settings.

**Boot:** For changing the system boot configurations.

Security: Use this menu to set User and Supervisor Passwords.

Chipset: For changing the chipset settings.

**Exit:** For selecting the exit options and loading default settings.



## 3.3 Advanced Menu

The Advanced menu items allow you to change the settings for the CPU and other system devices.

nain	Advanced	PCIPnP	Boot	Security	Chipset	Exit
Advanc WARNIN	ed Settings G: Setting w may cause	rong value system to	es in bel o malfund	ow sections	Confi	igure CPU.
<ul> <li>CPU</li> <li>IDE</li> <li>Supe</li> <li>Hard</li> <li>ACPI</li> <li>AHCI</li> <li>ISA</li> <li>USB</li> </ul>	Configuratio Configuratio rIO Configur ware Health Configurati Configuratio Configuratio	n ation Configurat on on n n	tion		¢ t↓ Enter F1 F10 ESC	Select Screen Select Item Go to Sub Scr General Help Save and Exit Exit

- Use the arrow keys to move between fields. Modify the selected field using the PgUP/PgDN/+/- keys. Some fields let you enter numeric values directly.
- 3. After you have finished with the Advanced setup, press the <ESC> key to return to the main menu.



### 3.3.1 CPU Configuration

This sub menu shows the CPU-related information which is automatically detected by BIOS.

BIOS SETUP UTI Advanced	
Configure advanced CPU settings Module Version:3F.1D	Disabled for WindowsXP
Manufacturer:Intel Intel(R) Atom(TM) CPU D525 @ 1.80GHz Frequency :1.80GHz FSB Speed :800MHz Cache L1 :48 KB Cache L2 :1024 KB Ratio Actual Value:9	
Max CPUID Value LimitIDisabled]Execute-Disable Bit CapabilityIEnabled]Hyper Threading TechnologyIEnabled]Intel (R) SpeedStep (tm) techIDisabled]	<ul> <li>← Select Screen</li> <li>↑↓ Select Item</li> <li>← Change Option</li> <li>F1 General Help</li> <li>F10 Save and Exit</li> <li>ESC Exit</li> </ul>
u02.68 (C)Comunight 1985-2009, Am	erican Mematrends, Inc.



### **3.3.2 IDE Configuration**

This sub menu allows you to set or change the configurations for the IDE devices installed in the system.

	BIOS SETUP UTILITY	
Advanced		
IDE Configuration		Options
Configure SATA as	EIDEI	IDE AHCI
▶ Primary IDE Master	: [Not Detected]	
► Secondary IDE Master	: [Not Detected]	
		← Select Screen
		14 Select Item
		+- Change Option
		FI General Help
		ESC Exit
v02.68 (C) Copyr i	ght 1985-2009, American M	egatrends, Inc.

### **Primary \* IDE Master**

This information is auto-detected by BIOS and is not user-configurable. It will show "Not Detected" if no IDE device is installed in the system.

### **Primary IDE Slave**

This information is auto-detected by BIOS and is not user-configurable. It will show "Not Detected" if no IDE device is installed in the system.



### 3.3.3 Super IO Configuration

Configure SCH3112 Super I	0 Chipset	Allows BIOS to Selec
Serial Port1 Address Serial Port1 IRQ Serial Port2 Address Serial Port2 IRQ Serial Port2 Mode WatchDog time mode WatchDog Time-out	[3F8] [4] [2F8] [3] [Norma 1] [Second] [000]	Addresses.
		<ul> <li>← Select Screen</li> <li>↑↓ Select Item</li> <li>+- Change Option</li> <li>F1 General Help</li> <li>F10 Save and Exit</li> <li>ESC Exit</li> </ul>

### Serial Port1 Address: [3F8/IRQ4]

Selects the Serial Port1 base address and IRQ.

### Serial Port2 Address: [2F8/IRQ3]

Selects the Serial Port2 base address and IRQ. Serial Port2 Mode: [Normal] Selects the Serial Port mode.



# 3.3.4 Hardware Health Configuration

This screen shows you the CPU core voltage, System voltage, System temperature.

Advanced	BIOS SETUP UTILITY	
Hardware Health Config	Enables Hardware	
H/W Health Function	(Enabled)	Device.
CPU Temperature System Temperature	:89°C/192°F :30°C/86°F	
+1.5U VCORE +3.3U +5U +12U +3.3USB VBAT	: 1.484 U : 1.048 U : 3.265 U : 4.765 U : 12.375 U : 3.282 U : 2.973 U	<ul> <li>← Select Screen</li> <li>↑↓ Select Item</li> <li>+- Change Option</li> <li>F1 General Help</li> <li>F10 Save and Exit</li> <li>ESC Exit</li> </ul>



### 3.3.5 ACPI Configuration

This sub menu is used to change the settings for the ACPI.

BIOS SETUP UT	ILITY
ACPI Settings   General ACPI Configuration  Advanced ACPI Configuration  Chipset ACPI Configuration	General ACPI Configuration settings
	<ul> <li>← Select Screen</li> <li>↑↓ Select Item</li> <li>Enter Go to Sub Screen</li> <li>F1 General Help</li> <li>F10 Save and Exit</li> <li>ESC Exit</li> </ul>
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**Geneal ACPI Configuration** This sub menu is used to change the General ACPI Configuration for the ACPI.

BIOS SETUP UTILIT	Ϋ́Υ
Advanced	
General ACPI Configuration	Select the ACPI
Suspend mode [Auto] Repost Video on S3 Resume [No]	System Suspend.
	<ul> <li>← Select Screen</li> <li>↑↓ Select Item</li> <li>+- Change Option</li> <li>F1 General Help</li> <li>F10 Save and Exit</li> <li>ESC Exit</li> </ul>
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### Advanced ACPI Configuration

This sub menu configures additional ACPI options. It contains below sub-menus

	BIOS SETUP UTILITY	
Advanced		
Advanced ACPI Configuratio	m	Enable RSDP pointers
ACPI Version Features ACPI APIC support	IACPI 04.01 [Enabled]	Description Tables. Different ACPI version has some addition.
		<ul> <li>← Select Screen</li> <li>↑↓ Select Item</li> <li>← Change Option</li> <li>F1 General Help</li> <li>F10 Save and Exit</li> <li>ESC Exit</li> </ul>
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### ACPI Version Features: [ACPI v4.0]

This item allows you to enable or disable RSPD pointers to 64-bit Fixed System Description Tables.

### ACPI APIC support: [Enabled]

This item allows you to enable or disable APIC features.



**South Bridge ACPI Configuration** This sub menu is used to change the bridge settings for the ACPI.

South Bridge ACPI Configuration	Enable/Disable
USB Device Wakeup From S3/S4 [Disabled]	USB Device Wakeup From S3/S4.
	<ul> <li>← Select Screen</li> <li>↑↓ Select Item</li> <li>+- Change Option</li> <li>F1 General Help</li> <li>F10 Save and Exit</li> <li>ESC Exit</li> </ul>



**3.3.6 AHCI Configuration** This sub menu is used to change the settings for the AHCI.

BIOS SETUP UT	ILITY
Advanced	
AHCI Settings	While entering setup, BIOS auto detects the
► AHCI Port0 [Not Detected]	presence of IDE
▶ AHCI Port1 [Not Detected]	devices. This display: the status of auto detection of IDE devices.
	← Select Screen 1↓ Select Item Enter Go to Sub Screen F1 General Helm
	F10 Save and Exit ESC Exit

### **AHCI Port0**

AHCI Port0		Select the type
Device :Not Detected	of device connected to the system.	
SATA PortO S.M.A.R.T.	[Auto] [Enabled]	
		← Select Screen 1↓ Select Item +- Change Option F1 General Help
		F10 Save and Exit



### **AHCI Port1**

Advanced	BIUS SETUP UTILITY	
AHCI Port1		Select the type of device connected
Device :Not Detected SATA Port1 S.M.A.R.T.	[Auto] [Enabled]	to the system.
		<ul> <li>Select Screen</li> <li>Select Item</li> <li>Change Option</li> <li>General Help</li> <li>Save and Exit</li> <li>ESC Exit</li> </ul>
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**3.3.7 ISA Configuration** This sub menu is used to change the settings for the ISA.

ISA IO spaces Positively Decode Configuration settings
← Select Screen ↑↓ Select Item Enter Go to Sub Screen F1 General Help F10 Save and Exit ESC Exit

### **ISA Decode IO Spaces**

	BIOS SETUP UTILITY	
Advanced		
ISA Decode IO Spaces		<ul> <li>Positively Decode I/O</li> <li>Space Window 0.</li> </ul>
Decode I/O Space 0	[Enabled]	
I/O Decoding Speed	[Medium Speed]	
I/O Decoding Base Addr.	[ 100]	
I/O Decoding Size	[128 Bytes]	
Decode I/O Space 1	[Enabled]	
I/O Decoding Speed	[Medium Speed]	
I/O Decoding Base Addr.	[ 180]	
I/O Decoding Size	[ 64 Bytes]	
Decode I/O Space 2	[Enabled]	
I/O Decoding Speed	[Medium Speed]	
I/O Decoding Base Addr.	[ 10]	← Select Screen
I/O Decoding Size	[ 32 Bytes]	↑↓ Select Item
Decode I/O Space 3	[Enabled]	+- Change Option
I/O Decoding Speed	[Medium Speed]	F1 General Help
I/O Decoding Base Addr.	E 2001	F10 Save and Exit
I/O Decoding Size	[128 Bytes]	ESC Exit
Decode I/O Space 4	[Enabled]	
I/O Decoding Speed	[Medium Speed]	
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### **ISA Decode Memory Spaces**

Advanced		
ISA Decode Memory Spaces		Positively Decode Memory Snace Window 0
Decode Hemory Space 0 Memory Decoding Speed Memory Decoding Base Addr. Memory Decoding Size Decode Memory Space 1 Memory Decoding Speed Memory Decoding Size Decode Memory Space 2 Memory Decoding Speed Memory Decoding Speed Memory Decoding Base Addr.	Enabled] [Medium Speed] [D00] [64 KB] [Enabled] [Medium Speed] [0] [32 KB] [Enabled] [Medium Speed] [0] [0]	← Select Screen
Decode Memory Space 3 Memory Decoding Speed Memory Decoding Base Addr. Memory Decoding Size	L 32 KBI [Enabled] [Medium Speed] [ 0] [ 32 KB]	+- Change Option F1 General Help F10 Save and Exit ESC Exit



**3.3.8 USB Configuration** This sub menu allows you to change the USB-related features.

Advanced	BIOS SETUP UTILITY	
USB Configuration		Enables support for
Module Version - 3.0.0-14.4 USB Devices Enabled : 1 Keyboard		— legacy USB. AUTO option disables legacy support if no USB devices are connected.
Legacy USB Support Port 64/60 Emulation USB 2.0 Controller Mode BIOS EHCI Hand-Off	(Enabled) (Disabled) (HiSpeed) (Enabled)	
		<ul> <li>← Select Screen</li> <li>↑↓ Select Item</li> <li>← Change Option</li> <li>F1 General Help</li> <li>F10 Save and Exit</li> <li>ESC Exit</li> </ul>
	4005 2000 A	ESC Exit



### 3.4 PCIPnP Menu

This PCIPnP menu items allow you to change the settings for the advanced PCI/PnP.

Use the PCIPnP Setup option as follows: 1. Choose "PCIPnP" from the main menu. The following screen appears:

	BIOS SE	TUP UTILITY			
Main Advanced PCIPnP	Boot	Security	Chi	pset	Exit
Advanced PCI/PnP Settings			4	Clear	NURAM during
WARNING: Setting wrong value may cause system to	s in belo malfunc	w sections tion.		09310	
Clear NURAM	[No]				
Plug & Play O/S	[No]				
PCI Latency Timer	[64]				
Allocate IRQ to PCI VGA	[Yes]				
Palette Snooping	Disa	bledl			
PCI IDE BusMaster	[Enab	led]			
OffBoard PCI/ISA IDE Card	[Auto				
				+	Select Screen
IRQ3	[Avai	lablel		_t↓	Select Item
IRQ4	[Avai	lablel		+-	Change Option
IRQ5	[Avai	lablel		F1	General Help
IRQ7	[Avai	lablel		F10	Save and Exit
IRQ9	[Avai	lablel		ESC	Exit
IRQ10	[Avai	lablel			
IRQ11	[Ava i	lablel			
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- 2. Use the arrow keys to move between items and to select values. Modify the selected fields using the PgUP/PgDN keys. Press the <F1> "Help" key for information on the available options:
- 3. After you have finished with the PCIPnP Setup, press the <ESC> key to return to the main menu.

### Clear NVRAM: [No]

This item allows you to clear the BIOS setting

### Plug & Play O/S: [No]

No: lets the BIOS configure all the devices in the system.

Yes: lets the OS configure Plug & Play devices not required for boot if your system has a Plug & Play operating system.

### PCI Latency Timer: [64]

This item allows you to select the value in units of PCI clocks for the PCI device latency timer register. This setting controls how many PCI clocks each PCI device can hold the bus before another PCI device takes over.



### Allocate IRQ to PCI VGA: [Yes]

BIOS assigns an IRQ to PCI VGA card if the card requests for an IRQ.

### Palette Snooping: [Disabled]

This item allows you to enable or disable the feature. When set to [Enabled], the palette snooping feature informs the PCI devices that an ISA graphics device is installed in the system so that the device can function correctly.

### PCI IDE BusMaster: [Enabled]

This item allows you to enable or disable the feature. Enable: BIOS uses PCI bus mastering for reading/writing to IDE devices.

### OffBoard PCI/ISA IDE Card: [Auto]

This item allows you to configure the setting of OffBoard PCI/ISA IDE Card.



# 3.5 Boot Menu

Use the Boot Setup option as follows:
Choose "Boot" from the main menu. The following screen appears:

BIOS SETUP UTILITY						
Main	Advanced	PCIPnP	Boot	Security	Chipset	Exit
Boot S	ettings				Con	figure Settings
▶ Boot	Settings Co	nfiguratio	m		— dur	ing System Boot.
					<ul> <li>↓</li> <li>↑↓</li> <li>Ent</li> <li>F1</li> <li>F10</li> <li>ESC</li> </ul>	Select Screen Select Item er Go to Sub Screen General Help Save and Exit Exit
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- 2. Move between items and select values by using the arrow keys. Modify the selected fields using the PnUP/PgDN Keys. For information on the various options, press <F1> key .
- 3. After you have finished with the Boot setup, press the <ESC> key to return to the main menu.



### 3.5.1 Boot Settings Configuration

This item is used to configure system boot setting with below sub menus:

Boot Settings Configuration	Allows BIOS to skip	
Quick Boot Quiet Boot AddOn ROM Display Mode Bootup Num-Lock PS/2 Mouse Support Wait For 'F1' If Error Hit 'DEL' Message Display Interrupt 19 Capture	Enabled1 [Disabled] [Force BIOS] [On] [Auto] [Enabled] [Enabled] [Disabled]	— Certain tests while booting. This will decrease the time needed to boot the system.
		<ul> <li>← Select Screen</li> <li>↑↓ Select Item</li> <li>+- Change Option</li> <li>F1 General Help</li> <li>F10 Save and Exit</li> <li>ESC Exit</li> </ul>

### Quick Boot: [Enabled]

This item allows BIOS to skip certain tests (POST, Power On Self Tests) while booting. This will decrease the time needed to boot the system.

### Quiet Boot: [Disabled]

This item allows you to enable or disable the full screen logo display feature. Disabed: displays normal POST messages.

### Bootup Num-Lock: [On]

Allows you to select the Power-on state for the Num-Lock.

### PS/2 Mouse Support: [Auto]

Select support for PS/2 Mouse.

### Wait for 'F1' If Error: [Enabled]

Wait for F1 key to be pressed if error occurs.

### Hit 'DEL' Message Display: [Enabled]

Displays "Press DEL to run Setup" in Post.

### Interrupt 19 Capture: [Disabled]

This item allows the option ROMs to trap Interrupt 19.



# 3.6 Security Menu

### I Use the Security Setup option as follows:

1. Choose "Security" from the main menu. The following screen appears:

BIUS SETUP UTILITY					
Main	Advanced	PCIPnP	Boot	Security	Chipset Exit
Secur i	ty Settings	Install or Change the			
Superv User H Change	isor Passwor 'assword : Supervisor <b>: User Passwo</b>	d :Not Ins :Not Ins Password rd	talled talled		— passwora.
Boot S	Sector Virus	Protect ion	Disa	ıbledl	
					← Select Screen ↑↓ Select Item Enter Change
					Et Coursel Hala

- Move between items and select values by using the arrow keys. Modify the selected fields using the PgUP/PgDN keys. Please press the <F1> key for information on the various options.
- 3. After you have finished with the Security setup, press the <ESC> key to return to the main menu.

### Change Supervisor Password:

This item allows you to set or change the supervisor password. The Supervisor Password item on top of the screen shows the default Not Installed. After you have set a password, this item shows Installed.

### **Change User Password:**

This item allows you to set or change the user password. The User Password item on top of the screen shows the default Not Installed. After you have set a password, this item shows Installed.

### **Clear User Password:**

This item allows you to clear the user password.

### **Boot Sector Virus Protection: [Disabled]**

This item allows you to enable or disable the boot sector virus protection. If enabled, AMI BIOS will issue a warning when a virus or program attempts

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to write to the hard disk's boot sector or attempts to execute disk format command.



# 3.7 Chipset Menu

# $\prod$ Use the Chipset Setup option as follows:

1. Choose "Chipset" from the main menu. The following screen appears.



- Move between items and select values by using the arrow keys. Modify the selected field the PgUP/PgDN keys. For information on the various options, press <F1> key.
- After you have finished with the Chipset Setup, press the <ESC> key to return to the main menu.



# 3.7.1 North Bridge Configuration

BIOS SETUP UTILITY	Chipset
North Bridge Chipset Configuration	Options
PCI MMIO Allocation: 46B To 3072MB DRAM Frequency [Max MHz] Configure DRAM Timing by SPD [Enabled]	Auto Max MHz
Initate Graphic Adapter [IGD] Internal Graphics Mode Select [Enabled, 8MB]	
PEG Port Configuration	
Video Function Configuration	<ul> <li>← Select Screen</li> <li>↑↓ Select Item</li> <li>+- Change Option</li> </ul>
	F1 General Help F10 Save and Exit ESC Exit
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### Initate Graphic Adapter: [IGD]

This item allows you to set the graphic adapter.

### Internal Graphics Mode Select: [Enabled, 8MB]

Select the amount of system memory used by the internal graphics device.



# Video Function Configuration

llideo Function Configuration		Ontions
DUMI Mode Select	DVMT Model [256MB]	Fixed Mode
Boot Display Device Flat Panel Type Backlight Control Support BIA Control TV Standard Spread Spectrum Clock	[VBIOS-Default] [1366*768] [VBIOS-Default] [VBIOS-Default] [VBIOS-Default] [Disabled]	
		<ul> <li>← Select Screen</li> <li>↑↓ Select Item</li> <li>← Change Option</li> <li>F1 General Help</li> <li>F10 Save and Exit</li> <li>ESC Exit</li> </ul>



# 3.7.2 South Bridge Configuration

	BIOS SETUP UTILITY	Chipset	
South Bridge Chipset Configura	Options		
USB 2.0 Controller HDA Controller SMBUS Controller	[Enabled] [Enabled] [Enabled]		
SLP_S4# Min. Assertion Width Restore on AC Power Loss	[1 to 2 seconds] [Last State]		
		← Select Screen ↑↓ Select Item	
		+- Change Option F1 General Help F10 Save and Exit ESC Exit	

### USB 2.0 Controller: [Enabled]

This item allows you to enable or disable the USB 2.0 controller.

### HAD Controller: [Enabled]

This item allows you to enable or disable the HAD Controller.

### SMBUS Controller: [Enabled]

This item allows you to enable or disable the SMBUS Controller.



# 3.8 Exit

The item allows you to save or discard your changes to the BIOS items, and load the optimal defaults or failsafe defaults for the BIOS items.

# $\bigcup$ Use the Exit option as follows:

1. Choose "Exit" from the main menu, the following screen appears.

BIOS SETUP UTILITY								
Main	Advanced	PCIPnP	Boot	Security	Chipset	Exit		
Exit Options Save Changes and Exit Discard Changes and Exit						<ul> <li>Exit system setup after saving the changes.</li> <li>F10 key can be used for this operation.</li> </ul>		
								Discard Changes
Load 0 Load F	ptimal Defau ailsafe Defa	lts ults						
					÷	Select Screen		
					†↓ Enter	Select Item r Go to Sub Screen		
					F1 F10 ESC	General Help Save and Exit Exit		
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- Move between items and select values by using the arrow keys. Modify the selected fields using the PgUP/PgDN keys. For information on the various options, please press <F1> key.
- 3. Please press the <ESC> key to return the main menu after finishing with the Exit Options.

### Save Changes and Exit:

Save changes of values to CMOS and exit the CMOS setup program. F10 key can be used for this operation.

### **Discard Changes and Exit:**

Discard all CMOS changes and exit the CMOS setup program. ESC key can be used for this operation.

### **Discard Changes:**

Discard all CMOS changes and load the previously saved values. F7 key can be used for this operation.



### Load Optimal Defaults:

This item allows you to load optimal defaults for each of the parameters on the Setup menus, which will provide the best performance settings for your system. F9 key can be used for this operation.

### Load Failsafe Defaults:

This item allows you to load failsafe defaults for each of the parameters on the Setup menus, which will provide the most stable performance settings. F8 key can be used for this operation.