

User Manual

AIMB-256

Socket P µFC-PGA 478 Intel[®] Core[™] 2 Duo / Intel Core[™] Solo / Intel Celeron[®] processor 800 MHz FSB Industrial Mini-ITX Motherboard with PCI/DDR2/Dual GbE



Trusted ePlatform Services

Safety Information

Electrical safety

- To prevent electrical shock hazard, disconnect the power cable from the electri-cal 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 connec-tors, 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.



Caution! The symbol of the crossed out wheeled bin indicates that the product (electrical and electronic equipment) should not be placed in municipal waste. Check local regulations for disposal of electronic products.

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Technical Support

If a problem arises with your system and no solution can be obtained from the user's manual, please contact your place of purchase or local distributor. Alternatively, please try the following help resources for further guidance. Visit the Advantech website for FAQ, technical guide, BIOS updates, driver updates, and other information: http://support.advantech.com.tw/Support/default.aspx

Packing List

Before you begin installing your single board, please make sure that the following materials have been shipped:

- 1 x Intel GME965 Mini ITX Main board
- 1 x CD-ROM contains the followings:
 - User's manual (this manual in PDF file)
 - Driver CD
- 2 x COM cables (9-pin w/o bracket, 26 cm)
- 1 x IDE HDD cable (40-pin, 30 cm)
- 2 x SATA data cables
- 2 x SATA power cables
- 1 x I/O Shield
- 1 x Startup Manual

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

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Production Introduction

This chapter describes the main board features and the new technologies it supports.

Before you Proceed 1.1

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



- Unplug the power cord from the wall socket before touching any component.
 - Use a grounded wrist strap or touch a safely grounded object or a metal object, such as the power supply case, before handling components to avoid damaging them due to static electricity
 - Hold components by the edges to avoid touching the ICs on them.
 - Whenever you uninstall any component, place it on a grounded antistatic pad or in the bag that came with the component.
 - Before you install or remove any component, ensure that the ATX power supply 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.

Motherboard Overview 1.2

Before you install the motherboard, study the configuration of your chassis to ensure that the motherboard fits into it. Refer to the chassis documentation before installing the motherboard.

Warning! Make sure to unplug the power cord before installing or removing the motherboard. Failure to do so can cause you physical injury and damage motherboard components.

1.2.1 **Placement Direction**

When installing the motherboard, make sure that you place it into the chassis in the correct orientation. The edge with external ports goes to the rear part of the chassis.

1.2.2 Screw Holes

Place four (4) screws into the holes indicated by circles to secure the motherboard to the chassis.

Caution! Do not over tighten the screws! Doing so can damage the motherboard.



Place this side towards the rear of the chassis.



1.3 Motherboard Layout



Figure 1.1 Motherboard Layout

1.3.1 Layout Content List

Table 1.1: Slot	S		
Label	Function	Note	Page
CF1A	Compact Flash connector	(Rear side)	N/A
SO-DIMM1	200-pin SODIMM slot 1		13-16
SO-DIMM2	200-pin SODIMM slot 2		13-16
PCI1	PCI slot		16
Table 1.2: Jum	pers		
Label	Function	Note	Page
CCMOS1	Clear CMOS	3 x 1 header, pitch 2.00 mm	18
JCOMPWR1,2	COM 1, 2 RI/+5 V/+12 V selection	3 x 2 header, pitch 2.00 mm	19
JCOMPWR3,4	COM 3, 4 RI/+5 V/+12 V selection	3 x 2 header, pitch 2.00 mm	20
SM_PWRBTN1	SM power connector	3 x 1 header, pitch 2.00 mm	21
Table 1.3: Real	r Panel Connector		
Label	Function	Note	Page
KBMS1	PS/2 keyboard and mouse	6-pin Mini-Din	21
DUALCOM1	Serial port connector x 2	D-sub 9-pin, male	21
VGA_DVI-D1	VGA connector DVI connector	D-sub 15-pin, female	21
USB1	RJ-45 Ethernet connector x 1 USB connector x 2		22
USB2	RJ-45 Ethernet connector x 1 USB connector x 2	(Optional 2nd LAN)	22
AUDIO1	Line-in port, Line-out port, Micro- phone port	5.1 Channel Audio I/O (3 jacks)	22
Table 1.4: Inter	mal Connector		
Label	Function	Note	Page
AMPJ1 (Optional)	Amplifier connector	4 x 1 header, pitch 2.54 mm	23
ATXPWR1	ATX power connector	10 x 2 header	23
COM3	Serial port 3 connector	5 x 2 header, pitch 2.54 mm	24
COM4 Serial port 4 connector		5 x 2 header, pitch 2.54 mm	24
CPU_FAN1	CPU fan connector	4 x 1 wafer, pitch 2.54 mm	25
PWR_FAN1	Power fan connector	3 x 1 wafer, pitch 2.54 mm	25
FPIO1	System panel connector	5 x 2 header, pitch 2.54 mm	26
IDE1	Primary IDE connector	20 x 2 header, pitch 2.00 mm	27

Table 1.4: Inte	rnal Connector		
JLVDS1	LVDS connector	HIROSE DF13S-40DP- 1.25 V	27
JBKL1	LCD Inverter connector	5 x 1 header, pitch 2.00 mm	28
JDIO1	Digital I/O connector	5 x 2 header, pitch 2.00 mm	28
JSPI1	SPI connector	4 x 2 header, pitch 2.5 4mm	29
SPDIF_OUT2	Digital Audio connector	4 x 1 header, pitch 2.54 mm	29
SATA1,2,3	Serial ATA connectors 1,2,3 [black]	7-pin header	30
USB3	USB 2.0 connector	5 x 2 header, pitch 2.54 mm	30
USB4	USB 2.0 connector	5 x 2 header, pitch 2.54 mm	30
USB5	USB 2.0 connector	5 x 2 header, pitch 2.54 mm	30

1.4 Central Processing Unit (CPU)

The motherboard comes with a surface mount 478-pin socket designed for the Intel® 479P Core Duo / Core Solo / Core 2 Duo CPU with 65nm process.

Take note of the marked corner (with gold triangle) on the CPU. This mark should match a specific corner on the socket to ensure correct installation.





Make sure the AC power is off before you install the CPU. If installing a dual-core CPU, connect the CPU fan cable to the CPU_FAN1 connector to ensure system stability.

Caution! 📕



Your boxed Intel® socket 479P Core Duo / Core Solo / Core 2 Duo CPU with 65nm process package should come with installation instructions for the CPU, heatsink, and the retention mechanism. If the instructions in this section do not match the CPU documentation, follow the latter.

- Upon purchase of the motherboard, make sure that the PnP cap is on the socket and the socket contacts are not bent. Contact your retailer immediately if the PnP cap is missing, or if you see any damage to the PnP cap/socket contacts/motherboard components. Your place of purchase or local distributor will shoulder the cost of repair only if the damage is shipment/transit-related.
- Keep the cap after installing the motherboard. Your place of purchase or local distributor will process Return Merchandise Authorization (RMA) requests only if the motherboard comes with the cap on the socket.
- The product warranty does not cover damage to the socket contacts resulting from incorrect CPU installation/removal, or misplacement/loss/ incorrect removal of the PnP cap.

1.4.1 Installing the CPU

1. Locate the CPU socket on the motherboard.



Note!

Before installing the CPU, make sure that the socket box is facing toward you.



2. The processor socket comes with a screw to secure the processor; please unlock the screw first.



- 3. Position the CPU above the socket and the gold triangular mark on the CPU must align with pin 1 of the CPU socket.
- 4. Carefully insert the CPU into the socket until it fits in place.
- 5. Turn the screw to the lock position.





Warning! The CPU fits in only one correct orientation. To prevent bending the connectors on the socket and damaging the CPU, DO NOT force the CPU into the socket.

Warning! After installation, make sure to plug-in the ATX power cable into the motherboard.



1.4.2 Installing the CPU Heatsink and Fan

The Intel[®] socket 479P Core[™] Duo / Core[™] Solo / Core[™] 2 Duo CPU processor requires a specially designed heatsink and fan assembly to ensure optimum thermal condition and performance.



- Install the motherboard to the chassis before you install the CPU fan and heatsink assembly.
- 自
- When you buy a boxed Intel[®] processor, the package includes the CPU fan and heatsink assembly. If you buy a CPU separately, make sure that you use only an Intel[®] - certified multi - directional heatsink and fan.



Caution! If you purchased a separate CPU heatsink and fan assembly, make sure that you have properly applied Thermal Interface Material to the CPU heatsink or CPU before you install the heatsink and fan assembly. 1. Place the heatsink on top of the installed CPU, making sure that the four fasteners match the holes on the motherboard.



Fastener



Note!

Orient the heatsink and fan assembly so that the CPU fan cable is closest to the CPU fan connector.

Note!

Make sure each fastener is oriented as shown, with the narrow groove directed outward.

2. Push down two fasteners at a time in a diagonal sequence to secure the heatsink and fan assembly in place.





3. Connect the CPU fan cable to the connector on the motherboard labelled CPU_FAN1.



Caution!

- Do not forget to connect the fan cables to the fan connectors. Insufficient air flow inside the system may damage the motherboard components, and hardware monitoring errors can occur if you fail to plug in this connector.
- These are not jumpers! DO NOT place jumper caps on the fan connectors.

1.4.3 Uninstalling the CPU Heatsink and Fan

- 1. Disconnect the CPU fan cable from the connector on the motherboard.
- 2. Rotate each fastener counterclockwise.



3. Pull up two fasteners at a time in a diagonal sequence to disengage the heatsink and fan assembly from the motherboard.





4. Carefully remove the heatsink and fan assembly from the mother-board.





Refer to the documentation in the boxed or stand-alone CPU fan package for detailed information on CPU fan installation.

1.5 System Memory

1.5.1 DIMM Sockets Location

The motherboard comes with two 200-pin Double Data Rate 2 (DDR2) SODIMM sockets.

A DDR2 module has the same physical dimensions as a DDR DIMM but has a 200pin footprint compared to the 184-pin DDR DIMM. DDR2 DIMMs are notched differently to prevent installation on a DDR DIMM socket. The following figure illustrates the location of the sockets:



1.5.2 Memory Configurations

You can install 128 MB, 256 MB, 512 MB, 1GB and 2 GB DDR2 SDRAM DIMMs into the SODIMM sockets using the memory configurations in this section.



1.5.3 Installing a DDR2 DIMM



Caution! Make sure to unplug the power supply before adding or removing DIMMs or other system components. Failure to do so may cause severe damage to both the motherboard and the components.

- 1. Locate the DIMM socket on the board.
- 2. Hold two edges of the DIMM module carefully, and keep away of touching its connectors.
- 3. Align the notch key on the module with the rib on the slot.
- 4. Firmly pressing a module into the socket snaps it into the mounting notch and engages the ejectors. Do not force the DIMM module in with extra force as the DIMM module only fit in one direction.





- A DDR2 DIMM is keyed with a notch so that it fits in only one direction. DO NOT force a DIMM into a socket to avoid damaging the DIMM.
 - The DDR2 DIMM sockets do not support DDR DIMMs. DO NOT install DDR DIMMs to the DDR2 DIMM socket.

1.5.4 Removing a DDR2 DIMM

1. Press the two ejector tabs on the slot outward simultaneously, and then pull out the DIMM module.



Caution! Support the DIMM lightly with your fingers when pressing the ejector tabs. The DIMM might get damaged if it flips out with extra force.

1.6 Expansion Slots

In the future, you may need to install expansion cards. The following sub-sections describe the slots and the expansion cards that they support.

Warning! Make sure to unplug the power cord before adding or removing expansion cards. Failure to do so may cause you physical injury and damage motherboard components.

1.6.1 Installing an Expansion Card

- 1. Before installing the expansion card, read the documentation that came with it and make the necessary hardware settings for the card.
- 2. Remove the system unit cover (if your motherboard is already installed in a chassis).
- 3. Remove the bracket opposite the slot that you intend to use. Keep the screw for later use.
- 4. Align the card connector with the slot and press firmly until the card is completely seated on the slot.

- 5. Secure the card to the chassis with the screw you removed earlier.
- 6. Replace the system cover.

1.6.2 Configuring an Expansion Card

After installing the expansion card, configure it by adjusting the software settings.

- 1. Turn on the system and change the necessary BIOS settings if any.
- 2. Assign an IRQ to the card if needed. Refer to the tables on the next page.
- 3. Install the software drivers for the expansion card.

1.6.3 Standard Interrupt Assignments

Table 1.	Table 1.5: Standard Interrupt Assignments				
IRQ	Priority	Standard Function			
0	1	System Timer			
1	2	Keyboard Controller			
2	-	Redirect to IRQ#9			
3	11	IRQ holder for PCI steering*			
4	12	Communications Port (COM1)*			
5	13	IRQ holder for PCI steering*			
6	14	Floppy Disk Controller			
7	15	Printer Port (LPT)*			
8	3	System CMOS/Rear Time			
9	4	IRQ holder for PCI steering*			
10	5	IRQ holder for PCI steering*			
11	6	IRQ holder for PCI steering*			
12	7	PS/2 Compatible Mouse Port*			
13	8	Numeric Data Processor			
14	9	Primary IDE Channel			
15	10	Secondary IDE Channel			
* There IF	* There IRQs are usually available for ISA or PCI device.				

1.6.4 PCI Slot

AIMB-256 has one PCI slot. The PCI slot supports cards such as a LAN card, SCSI card, USB card, and other cards that comply with PCI specifications. The figure shows a LAN card installed in a PCI slot.



1.7 Jumpers

1.7.1 Clear CMOS (CCMOS1)

This jumper allows you to clear the Real Time Clock (RTC) RAM in CMOS. You can clear the CMOS memory of date, time, and system setup parameters by erasing the CMOS RTC RAM data. The onboard button cell battery powers the RAM data in CMOS, which include system setup information such as system passwords. To erase the RTC RAM:

- 1. Turn OFF the computer and unplug the power cord.
- 2. Remove the onboard battery.
- Move the jumper cap from pins 1-2 (default) to pins 2-3. Keep the cap on pins 2-3. 3 for about 5~10 seconds, then move the cap back to pins 1-2.
- 4. Re-install the battery.
- Plug the power cord and turn ON the computer. 5.
- 6. Hold down the key during the boot process and enter BIOS setup to reenter data.

Caution! Except when clearing the CMOS, never remove the cap on CLRTC jumper default position. Removing the cap will cause system boot failure!











1.7.2 COM1 RI/+5 V/+12 V Selection (JCOMPWR1, JCOMPWR2)



1.7.3 COM2 RI/+5 V/+12 V Selection (JCOMPWR1, JCOMPWR2)



1.7.4 COM3 RI/+5 V/+12 V Selection (JCOMPWR3, JCOMPWR4)

 	JCOMPWR3		JCOMPWR4
+5 V (Default)	2 6 •••• • • • 1 5	+	
+12 V	2 6 	+	
Ring	2 6 • • • • • • • • 1 5	+	

1.7.5 COM4 RI/+5 V/+12 V Selection (JCOMPWR3, JCOMPWR4)

 	JCOMPWR3	JCOMPWR4
+5 V (Default)		
+12 V		
Ring		

1.7.6 SM Power Connector (SM_PWRBTN1)



ATX Mode (Default)



1.8 Connectors

1.8.1 Rear Panel Connectors



Table 1.6: Rear Panel Connectors					
No	Label	Function	Description		
1	KBMS1	PS/2 mouse connector	The standard PS/2 mouse DIN connec- tor is for a PS/2 mouse.		
2	DUALCOM1	Serial port connector x 2	D-sub 9-pin, male		
3	VGA_DVI-D1	DVI port			

Table 1.6: Rear Panel Connectors 4,5 USB1, USB2 LAN (RJ-45) connector This port allows Gigabit connection to a Local Area Network (LAN) through a ACT/LINK SPEED LED LED network hub. Refer to the table below for the LAN port LED indications. The optional 10/100 Mbps LAN controller allows 10/100 Mbps connection to a Local Area Network (LAN) through a LAN port network hub.

Table 1.7: LEDs

ACT / LINK	LED	SPEED LED	SPEED LED			
Status	Description	Status	Description			
OFF	No link	OFF	10 Mbps connection			
Orange	Linked	ORANGE	100 Mbps connection			
Blinking	Data activity	GREEN	1 Gbps connection			



Table	Table 1.8: Rear Panel Connectors						
No	Label	Function	Description				
6	AUDIO1	Line-In port (Light Blue).	This port connects a tape, CD, DVD player, or other audio sources.				
7	AUDIO1	Line-Out port (Lime)	This port connects a headphone or a speaker. In 4-channel, 6-channel, and 8-channel configuration, the function of this port becomes Front Speaker Out.				
8	AUDIO1	Microphone port (Pink)	This port connects a microphone.				
9,10	USB1, USB2	USB 2.0 connector	These four 4-pin Universal Serial Bus (USB) ports are available for connect- ing USB 2.0 devices.				
11	VGA_DVI-D1	VGA port	This 15-pin port is for a VGA monitor or other VGA-compatible devices.				
12	KBMS1	PS/2 KB connector	This port is for a PS/2 keyboard.				

1.8.2 Amplifier Connector (AMPJ1) (Optional)



1.8.3 ATX Power Connector (ATXPWR1)

This connector is for an ATX Micro-Fit power supply. The plugs from the power supply are designed to fit these connectors in only one orientation. Find the proper orientation and push down firmly until the connectors mate completely.



Important notes on the Motherboard Power Requirements



Make sure that your ATX 12 V power supply can provide 8A on the +12 V lead and at least 1A on the +5-volt standby lead (+5 VSB). The minimum recommended wattage is 230 W, or 300 W for a fully configured system. The system can become unstable and might experience difficulty powering up if the power supply is inadequate.

You must install a PSU with a higher power rating if you intend to install additional devices.

1.8.4 Serial Port 3 Connector (COM3)





1.8.5 Serial Port 4 Connector (COM4)





1.8.6 CPU Fan Connector (CPU_FAN1)





- Do not forget to connect the fan cables to the fan connectors. Insufficient air flow inside the system may damage the motherboard components, and hardware monitoring errors can occur if you fail to plug this connector.
- These are not jumpers! DO NOT place jumper caps on the fan connectors.

1.8.7 Power Fan Connector (PWR_FAN1)







Do not forget to connect the fan cables to the fan connectors. Insufficient air flow inside the system may damage the motherboard components, and hardware monitoring errors can occur if you fail to plug this connector.

These are not jumpers! DO NOT place jumper caps on the fan connectors.

1.8.8 System Panel Connector (FPIO1)

This connector supports several chassis-mounted functions.



System Power LED (2-pin PWRLED)

This 2-pin connector is for the system power LED. Connect the chassis power LED cable to this connector. The system power LED lights up when you turn on the system power, and blinks when the system is in sleep mode.

ATX Power Button/Soft-off Button (2-pin PWRSW)

This connector is for the system power button. Pressing the power button turns the system on or puts the system in sleep or soft-off mode depending on the BIOS settings. Pressing the power switch for more than four seconds while the system is ON turns the system OFF.

Hard Disk Drive Activity LED (2-pin HDLED)

This 2-pin connector is for the HDD Activity LED. Connect the HDD Activity LED cable to this connector. The IDE LED lights up or flashes when data is read from or written to the HDD.

Reset Button (2-pin RESET)

This 2-pin connector is for the chassis-mounted reset button for system reboot without turning off the system power.

1.8.9 Primary IDE Connector (IDE1)









Caution! Please DO NOT use IDE1 and SATA2 at the same time. This is an incompatible conflict.

1.8.10 LVDS Connector (JLVDS1)



LVDS1 P2 LVDS1 N2

GND

VDS0_CLKP

LVDS1_P3 LVDS1_N3 6ND LVDS1_CLKH LVDS1_CLKH

+12V

1.8.11 LCD Inverter Connector (JBKL1)





Signal Des	scription
Signal	Signal Description
VR	Bright adjust. Vadj=0.75 V ~ 4.25 V
	(Recommended: 4.7K Ω , > 1/16 W)
ENBKL	LCD backlight ON/OFF control signal
	 Signal Des Signal VR ENBKL

1.8.12 Digital I/O Connector (JDIO1)





1.8.13 SPI Connector (JSPI1)



1.8.14 Digital Audio Connector (SPDIF_OUT2)

This connector is for an additional Sony/Philips Digital Interface (S/PDIF) port(s). Connect the S/PDIF module cable to this connector, then install the module to a slot opening at the back of the system chassis.





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The S/PDIF module is purchased separately.

1.8.15 Serial SATA Connector [Black] (SATA1, SATA2, SATA3)





When using the connectors in Standard IDE mode, connect the primary (boot) hard disk drive to the SATA1 connector.

Caution! Please DO NOT use IDE1 and SATA2 at the same time. This is an incompatible conflict.

1.8.16 USB 2.0 Connector (USB3, USB4, USB5)

These connectors are for USB 2.0 ports. Connect the USB/GAME module cable to any of these connectors, then install the module to a slot opening at the back of the system chassis. These USB connectors comply with USB 2.0 specification that supports up to 480 Mbps connection speed.




Caution! Never connect a 1394 cable to the USB connectors. Doing so will damage the motherboard!

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The USB module is purchased separately.





BIOS Setup

This chapter tells how to change the system settings through the BIOS setup menus. Detailed descriptions of the BIOS parameters are also provided.

2.1 BIOS Setup Program

This motherboard supports a programmable firmware chip that you can update using the provided utility. Use the BIOS Setup program when you are installing a motherboard, reconfiguring your system, or prompted to "Run Setup". This section explains how to configure your system using this utility.

Even if you are not prompted to use the Setup program, you can change the configuration of your computer in the future. For example, you can enable the security password feature or change the power management settings. This requires you to reconfigure your system using the BIOS Setup program so that the computer can recognize these changes and record them in the CMOS RAM of the firmware hub.

The firmware hub on the motherboard stores the Setup utility. When you start up the computer, the system provides you with the opportunity to run this program. Press during the Power-On-Self-Test (POST) to enter the Setup utility; otherwise, POST continues with its test routines.

If you wish to enter Setup after POST, restart the system by pressing <Ctrl+Alt+Delete>, or by pressing the reset button on the system chassis. You can also restart by turning the system off and then back on. Do this last option only if the first two failed.

The Setup program is designed to make it as easy to use as possible. Being a menudriven program, it lets you scroll through the various sub-menus and make your selections from the available options using the navigation keys.



- The default BIOS settings for this motherboard apply for most conditions to ensure optimum performance. If the system becomes unstable after changing any BIOS settings, load the default settings to ensure system compatibility and stability. Select the Load Optimized Defaults from the BIOS menu screen.
- The BIOS setup screens shown in this section are for reference purposes only, and may not exactly match what you see on your screen.
- Visit the system builder's website to download the latest BIOS file for this motherboard

2.1.1 Legend Box

The keys in the legend bar Allows you to navigate through the various setup menus

Key(s)	Function Description
←	Select Screen
↑ ↓	Select Item
+ -	Change Option / Field
Enter	Go to Sub Screen
PGDN	Next Page
PGUP	Previous Page
HOME	Go to Top of Screen
END	Go to Bottom of Screen
F2/F3	Change Colors
F7	Discard Changes
F8	Load Failsafe Defaults
F9	Load Optimal Defaults
F10	Save and Exit
ESC	Exit

2.1.2 List Box

This box appears only in the opening screen. The box displays an initial list of configurable items in the menu you selected.

2.1.3 Sub-menu

Note that a right pointer symbol (\rightarrow) appears to the left of certain fields. This pointer indicates that you can display a sub-menu from this field. A sub-menu contains additional options for a field parameter. To display a sub-menu, move the highlight to the field and press <Enter>. The sub-menu appears. Use the legend keys to enter values and move from field to field within a sub-menu as you would within a menu. Use the <Esc> key to return to the main menu.

Take some time to familiarize yourself with the legend keys and their corresponding functions. Practice navigating through the various menus and submenus. If you accidentally make unwanted changes to any of the fields, press <F6> to load the fail-safe default values. While moving around through the Setup program, note that explanations appear in the Item Specific Help window located to the right of each menu. This window displays the help text for the currently highlighted field.

2.2 BIOS Menu Screen

When you enter the BIOS, the following screen appears. The BIOS menu screen displays the items that Allows you to make changes to the system configuration. To access the menu items, press the up/down/right/left arrow key on the keyboard until the desired item is highlighted, then press [Enter] to open the specific menu.

	B	IOS SET	UP L	ITILITY		
<mark>Main</mark> Advanced HW	Monitor	TPM	1	Boot	Exit	
System Overview Version :08.00.14 Build Date:05/19/08 ID :02560102						Use [ENTER], [TAB] or [SHIFT-TAB] to select a field. Use [+] or [-] to
Intel(R) Core(TM)2 Duo Speed :2000MHz Count :1 Size :2040MB	CPU	T7300	02	2.00GHz		configure system Time.
System Time		[19:18	3:41]			
System Date		EMon 0	5/19	9/20081		← Select Screen
► IDE Configuration						 ↔ Change Field Tab Select Field F1 General Help F10 Save and Exit ESC Exit
v02.61 (C) Coj	pyright	1985-20	06,	America	an Meg	atrends, Inc.

2.2.1 Main

Use this menu for basic system configurations, such as time, date etc.

	B	IOS SET	UP UTILITY		
<mark>Main</mark> Advanced	HW Monitor	TPM	Boot	Exit	
System Overview Version :08.00.14 Build Date:05/19/01 ID :A2560100	1 3 2				Use [ENTER], [TAB] or [SHIFT-TAB] to select a field. Use [+] or [-] to
Intel(R) Core(TM)2 Speed :2000MHz Count :1 Size :2040MB	Duo CPU	T7300	@ 2.00GHz		configure system Time.
System Time System Date		[19:18 [Mon 0	: 41] 5/19/2008]		← Select Screen
► IDE Configuration					+- Change Field Tab Select Field F1 General Help F10 Save and Exit ESC Exit
v02.61 ((C)Copyright (1985-20	06, America	an Meg	atrends, Inc.

2.2.1.1 System Overview

These items show the firmware and hardware specifications of your system. Read only.

2.2.1.2 System Time

The time format is <Hour> <Minute> <Second>.

2.2.1.3 System Date

The date format is <Day>, <Month> <Date> <Year>.

2.2.1.4 IDE Configuration

	BI(os setui	UTILITY	ET S	
<mark>Main</mark> Advanced	HW Monitor	TPM	Boot	Exit	
System Overview					Use (ENTER), (TAB) or (SHIFT-TAB) to
Version :08.00.14 Build Date:05/19/08 ID :A256V102 Intel (R) Core (TM) 2 D Speed :2000MHz Count :1 Size :2040MB	uo CPU 1	[7300 G	9 2.00GHz		select a field. Use [+] or [-] to configure system Time.
System Time System Date		E19:18:4 EMon 05/	1] '19/2008]		← Select Screen
▶ IDE Configuration					 General Help F10 Save and Exit ESC Exit
v02.61 (C)	Copyright 19	985-2006	. America	an Meg	atrends, Inc.

	BIOS SETUP UTILITY	
Main		
IDE Configuration Primary IDE Master Primary IDE Slave Secondary IDE Master Secondary IDE Slave Third IDE Master Third IDE Slave Fourth IDE Slave Fourth IDE Slave Fourth IDE Slave	: Not Detected] : Not Detected]	While entering setup, BIOS auto detects the presence of IDE devices. This displays the status of auto detection of IDE devices.
		 ← Select Screen ↑↓ Select Item Enter Go to Sub Screen F1 General Help F10 Save and Exit ESC Exit
v02.61 (C)Copyrig	nt 1985-2006, American Me	gatrends, Inc.

■ Туре

Select the type of IDE drive. Setting to Auto allows automatic selection of the appropriate IDE device type. Select CDROM if you are specifically configuring a CD-ROM drive. Select ARMD (ATAPI Removable Media Device) if your device either is ZIP, LS-120, or MO drive. The options: [Not Installed], [Auto], [CD/ DVD], [ARMD].

Primary IDE Master	Select the type	
Onboard Device Not Detect	connected to the	
Type LBA/Large Mode Block (Multi-Sector Transfer PIO Mode DMA Mode S.M.A.R.T 32Bit Data Transfer Not Ins Auto CD/DVD ARMD	[Auto] [Auto] [Auto] [Auto] [Auto] Lauto] talled d]	← Select Screen †↓ Select Item +- Change Option F1 General Help F10 Save and Exit ESC Exit

LBA/Large Mode

Enabling LBA causes Logical Block Addressing to be used in place of Cylinders, Heads and Sectors. The options: [Disabled], [Auto].

Primary IDE Master		Disabled:
Onboard Device Not Detected	Auto: Enables LBA Mode	
Туре	[Auto]	device supports
LBA/Large Mode	[Auto]	it and the device
Block (Multi-Sector Transfer)	[Auto]	is not already
PIO Mode	[Auto]	formatted with
DMA Mode	[Auto]	LBA Mode Disabled
S.M.A.R.T	[Auto]	and the second s
32Bit Data Transfer	[Disabled]	

Block (Multi-Sector Transfer)
 Controls enabling of multi-sector transfer, if supported.
 The options: [Disabled], [Auto].

BIOS	SETUP UTILITY	
Primary IDE Master		Disabled: The Data
Onboard Device Not Detect	to the device	
Type LBA/Large Mode	[Auto] [Auto]	at a time. Auto: The Data
Block (Multi-Sector Transfe	r) [Auto]	transfer from and
DMA Mode	[Auto] [Auto]	occurs multiple
S.M.A.R.T 32Bit Data Transfer	[Auto] [Disabled]	sectors at a time if the device support it.

PIO Mode

Indicates the type of PIO (Programmed Input/Output).

BIOS SE	TUP UTILITY	
Primary IDE Master		Select PIO Mode.
Onboard Device Not Detected		
Туре	[Auto]	
LBA/Large Mode Block (Multi-Sector Transfer)	[Auto]	
FIO Mode DMB Mode	(Auto)	
S.M.A.R.T	[Auto]	
32Bit Data Transfer	[Disabled]	

DMA Mode

Indicate the type of Ultra DMA.

The options: [Auto], [SWDMan], [MWDMAn], [UDMAn].

BIOS SE	TUP UTILITY	
Primary IDE Master		Select DMA Mode.
Onboard Device Not Detected		detected.
Type LBA/Large Mode	[Auto] [Auto]	SWDMAn: SingleWordDMAn MWDMAn:
Block (Multi-Sector Transfer)	[Auto]	MultiWordDMAn
PIO Mode DMA Mode	[Auto] [Auto]	UDMAn: UltraDMAn
S.M.A.R.T 32Bit Data Transfer	[Auto] [Disabled]	

S.M.A.R.T

This allows you to activate the S.M.A.R.T. (Self-Monitoring Analysis & Reporting Technology) capability for the hard disks. S.M.A.R.T is a utility that monitors your disk status to predict hard disk failure. This gives you an opportunity to move data from a hard disk that is going to fail to a safe place before the hard disk becomes offline.

BIOS SE	TUP UTILITY	
Primary IDE Master		S.M.A.R.T stands
Onboard Device Not Detected		for Self- Monitoring,
Туре	[Auto]	Analysis and Reporting
LBA/Large Mode	[Auto]	Technology.
Block (Multi-Sector Transfer)	[Auto]	
PIO Mode	[Auto]	
DMA Mode	[Auto]	
S.M.A.R.T	[Auto]	
32Bit Data Transfer	[Disabled]	

32Bit Data Transfer

Enable 32-bit communication between CPU and IDE card. The options: [Enabled], [Disabled].

BIOS SE Main	TUP UTILITY	
Primary IDE Master		Enable/Disable 32- bit DATA Transfer.
Onboard Device Not Detected		
Туре	[Auto]	
LBA/Large Mode	[Auto]	
Block (Multi-Sector Transfer)	[Auto]	
PIO Mode	[Auto]	
DMA Mode	[Auto]	
S.M.A.R.T	[Auto]	
32Bit Data Transfer	[Enabled]	

2.2.2 Advanced

Use this menu to set up the items of special enhanced features.

Advanced Setting WARNING: Setting wrong values in below sections may cause system to malfunction.		Section for	
		configuration.	
APCI	Configuration		
> PCI P	nP	and the second sec	
▶ Chips	et	← Select Screen ↑↓ Select Item +- Change Field Enter Go to Sub screen	
		F1 General Help F10 Save and Exit	

2.2.2.1 APCI Configurations

Suspend Mode

This item specifies the power saving modes for ACPI function. If your operating system supports ACPI, you can choose to enter the Standby mode in S1 (POS) or S3 (STR) fashion through the setting of this field.

ACPI Settings		Select the ACPI
Suspend mode Repost Video on S3 Resume ACPI Version Features ACPI APIC support	lfntol INoJ IACPI v1.0] IEnabled]	— state used for System Suspend.
	Options — S1 (POS) S3 (STR) Auto	
		← Select Screen ↑↓ Select Item ← Change Option F1 General Help F10 Save and Exit ESC Exit

These options:

- [S1 (POS)] The S1 sleep mode is a low power state. In this state, no system context is lost (CPU or chipset) and hardware maintains all system contexts.
- [S3 (STR)] The S3 sleep mode is a lower power state where the information of system configuration and open applications/files is saved to main memory that remains powered while most other hardware components turn off to save energy. The information stored in memory will be used to restore the system when a "wake up" event occurs.

 Repost Video on S3 Resume Determine whether to invoke VGA BIOS post on S3/STR resume. The options: [No], [Yes].

ACPI Setting		Determines whether
Suspend mode Repost Wideo on S3 Resume ACPI Version Features ACPI APIC support	[S1 (POS)] [No] [ACPI v1.0] [Enabled]	post on S3/STR resume.

ACPI Version Features

Allows adding more tables for Advanced Configuration and Power Interface (ACPI) 2.0 specifications.

The options: [ACPI V1.0], [ACPI V2.0], [ACPI V3.0].

ACPI Setting		Enable RSDP
Suspend mode Repost Video on S3 Resu ACPI Version Features ACPI APIC support	[S1 (POS)] [No] [ACPI v1.0] [Enabled] Options 71.0 72.0	pointers to 64-bi Fixed System Description Tables. Di ACPI version has some
ACPI	/3.0	← Select Screen †↓ Select Item +- Change Field F1 General Help F10 Save and Exit

Chapter 2 BIOS Setup

ACPI APIC Support

Allows you to enable or disable the Advanced Configuration and Power Interface (ACPI) support in the Application-Specific Integrated Circuit (ASIC). When set to Enabled, the ACPI APCI table pointer is included in the RSDT pointer list. The options: [Disabled], [Enabled].



2.2.2.2 APM Configuration (Reserved)

Advanced Setting		Section for	
WARNING:	Setting wrong values in below sections may cause system to malfunction.	configuration.	
APCI	Configuration		
> PCI P	nP		
▶ Chips	et	← Select Screen ↑↓ Select Item +- Change Field Enter Go to Sub screen	
		F1 General Help F10 Save and Exit ESC Exit	

Warning! You may not use the APM Configuration Function; some APM functions may be limited by the hardware and software environment.

Power Management/APM

Supports more compatible feature for APM. Setting to [Enabled] will activate an Advanced Power Management (APM) device to enhance Max Saving mode and stop the CPU internal clock.

APM Configuration		Enable or Disable
Power Management/APM	[Enabled]	APT1.
Video Power Down Mode	[Suspend]	
Hard Disk Power Down Mode	[Suspend]	
Suspend Time Out	[Disabled]	
Throttle Slow Clock Ratio	[50%]	
Keyboard & PS/2 Mouse	IMONTTOR1	

Video Power Down Mode
 Power down video in suspend or standby mode.

The options: [Disabled], [Suspend].

APM Configuration		Power Down video
Power Management/APM Video Power Down Mode Hard Disk Power Down Mode Suspend Time Out Throttle Slow Clock Ratio Keyboard & PS/2 Mouse	[Enabled] [Suspend] [Suspend] [Disabled] [50%] [MONITOR]	Standby Mode.
Power Button Mode Advanced Resume E Resume On Ring Resume On Gbe8111B_1 Resume On Gbe8111B_2	Options	← Select Screen

Hard Disk Power Down Mode

Power down Hard Disk in suspend or standby mode. The options: [Disabled], [Suspend].

		m 1 1 1 m 1
Power Management/APM Video Power Down Mode Bard Disk Power Down Mode Suspend Time Out Throttle Slow Clock Ratio Keyboard & PS/2 Mouse	[Enabled] [Suspend] [Suspend] [Disabled] [50%] [MONITOR]	or Standby Mode.
Power Button Mode Advanced Resume E Resume On Ring	Options	

Suspend Time Out

The options: [Disabled], [1 Min], [2 Min], [4 Min], [8 Min], [10 Min], [20 Min], [30 Min], [40 Min], [50 Min], [60 Min].

Advanced	BIOS SETUP UTILITY
APM Configuration	
Power Management/APM Video Power Down Mode Hard Disk Power Down Mode Suspend Time Out Throttle Slow Clock Keyboard & PS/2 Mor Power Button Mode Advanced Resume Eve Resume On Ring Resume On Gbe8111 Resume On Gbe8111 Resume On RTC Al Resume On Keyboar	[Enabled] [Suspend] de [Suspend] Dissibled options abled in in in Min Min Min Min Min M

Throttle Slow Clock Ratio The options: [87.5%], [75.0%], [62.5%], [50%], [37.5%], [25%], [12.5%].

Advanced	BIOS SETUP UTILITY	
APM Configuration		
Power Management/i Video Power Down H Hard Disk Power Do Suspend Time Out	WM [Enabled] Aode [Suspend] wm Mode [Suspend] [Disabled] sk Ratio [50%]	
Keyboard & PS/2 M Power Button Mode	Options 87.5% 75.0%	
Advanced Resume F Resume On Ring Resume On Gbe81 Resume On Gbe81	62.5% 50% 37.5% 25%	← Select Screen
Resume On RTC A Resume On Keybo	12.5%	+- Change Field F1 General Help

 Keyboard & PS/2 Mouse The options: [IGNORE], [MONITOR].

APM Configuration		Monitor KBC Ports
Power Management/APM Video Power Down Mode Hard Disk Power Down Mode Suspend Time Out Throttle Slow Clock Ratio Keyboard & PS/2 Mouse	[Enabled] [Suspend] [Suspend] [Disabled] [50%] [MONITOR]	
Power Button Mode Advanced Resume E Resume On Ring Resume On Gbe81	Options	← Select Screen

Power Button Mode

This setting controls the operation of the power button.

APM Configuration		
Power Management/APM	[Enabled]	
Video Power Down Mode	[Suspend]	
Hard Disk Power Down Mode	[Suspend]	
Suspend Time Out	[Disabled]	
Throttle Slow Clock Ratio	[50%]	
Keyboard & PS/2 Mouse	[MONITOR]	
Power Button Mode	[On/Off]	

Resume On Ring

The options: [Enabled], [Disabled].

APM Configuration		
Power Management/APM	[Enabled]	
Video Power Down Mode	[Suspend]	
Hard Disk Power Down Mode	[Suspend]	
Suspend Time Out	[Disabled]	
Throttle Slow Clock Ratio	[50%]	
Keyboard & PS/2 Mouse	[MONITOR]	
Power Button Mode	[On/Off]	
Advanced Resume Event Cont	trols	
Resume On Ring	[Enabled]	and the second se
Resume On Gbe8111B 1	[Enabled]	← Select Screen
Resume On Gbe8111B 2	[Enabled]	↑↓ Select Item
Resume On RTC Alarm	[Disabled]	+- Change Field
Resume On Keyboard	[Specific Key]	F1 General Help
Specific Key for Power	c On	F10 Save and Exit
Resume On Mouse	[Enabled]	ESC Exit

 Resume On Gbe8111B_1/2 Disable/Enabled LAN GPI to generate a wake event. The options: [Enabled], [Disabled].

ADM Configuration		Disable/Enabled
		LAN GPI to
Power Management/APM	[Enabled]	generate a wake
Video Power Down Mode	[Suspend]	event.
Hard Disk Power Down Mode	e [Suspend]	
Suspend Time Out	[Disabled]	
Throttle Slow Clock Ratio	o [50%]	
Keyboard & PS/2 Mouse	[MONITOR]	
Power Button Mode	[On/Off]	
Advanced Resume Event Con	ntrols	
Resume On Ring	[Enabled]	
Resume On Gbe8111B 1	[Enabled]	
Resume On Gbe8111B 2	[Enabled]	<- Select Screen

Resume On RTC Alarm

When [Enabled], your can set the date and time at which the RTC (real-time clock) alarm awakens the system from suspend mode.

BIOS SETUP UTILITY Advanced		
APM Configuration		
Power Management/APM Video Power Down Mode Hard Disk Power Down Mode Suspend Time Out	[Enabled] [Suspend] [Suspend] [Disabled]	
Throttle Slow Clock Ratio Keyboard & PS/2 Mouse Power Button Mode	[50%] [MONITOR] [On/Off]	
Advanced Resume Event Cont	trols	
Resume On Ring Resume On Gbe8111B_1 Resume On Gbe8111B_2	[Enabled] [Enabled]	← Select Screen
Resume On RTC Alarm Resume On Keyboard	[Disabled] [Specific Key]	↑↓ Select Item +- Change Field

Resume On Keyboard

The options: [Disabled], [Specific Key], [Any Key].

BIOS SETUP UTILITY Advanced	
APM Configuration	Any Key:
Power Management/APM[Enabled]Video Power Down Mode[Suspend]Hard Disk Power Down Mode[Suspend]Suspend Time Out[Disabled]Throttle Slow ClockDisabled]Keyboard & PS/2 MousOptionsPower Button ModeSpecific KeyAdvanced Resume EverAny Key	Support "On/OFF" and "Suspend" for Power Button mode. Specific Key: Support "On/OFF" only for Power Button mode.
Resume On RingResume On Gbe8111B_1Resume On Gbe8111B_2Resume On Gbe8111B_2Resume On RTC Alarm[Disabled]Resume On Keyboard[Specific Key]	← Select Screen ↑↓ Select Item +- Change Field

Specific Key for PowerOn
 Predetermine key combination sequence that can wake up the system.

APM Configuration		Only the pre-
Power Management/APM Video Power Down Mode Hard Disk Power Down Moc Suspend Time Out Throttle Slow Clock Rati Keyboard & PS/2 Mouse	[Enabled] [Suspend] [Suspend] [Disabled] to [50%] [MONITOR]	combination in sequence can wake up the system.
Advanced Res Resume On Resume On Resume On Resume On Resume On Resume On Keyboard	[UN/UII] Password [Specific Kev]	← Select Screen ↑↓ Select Item +- Change Field

Resume On Mouse

The options: [Enabled], [Disabled].

BIOS SETUP UTILITY Advanced		
APM Configuration		
Power Management/APM Video Power Down Mode Hard Disk Power Down Mode Suspend Time Out Throttle Slow Clock Ratio	[Enabled] [Suspend] [Suspend] [Disabled] [50%]	
Power Button Mode Advanced Resume Event Cont	[On/Off]	
Resume On Ring Resume On Gbe8111B_1 Resume On Gbe8111B_2	[Enabled] [Enabled] [Enabled]	← Select Screen
Resume On RTC Alarm Resume On Keyboard Specific Key for Power	[Disabled] [Specific Key] r On	↑↓ Select Item +- Change Field F1 General Help F10 Save and Exit ESC Exit
Resume On Mouse Ac Loss State	[Enabled]	

Ac Loss State

Select the reset mode if AC power is lost to the system. The options: [Off], [On], [Last].

APM Configuration		3 cases = turn
Power Management/APM	[Enabled]	ON/ FULL
Video Power Down Mode	[Suspend]	
Hard Disk Power Down Mode	[Suspend]	
Suspend Time Out	[Disabled]	
Throttle Slow Clock Ratio	[50%]	
Keyboard & PS/2 Mouse	[MONITOR]	
Power Button Mode	[On/Off]	
Advanced Resume Event Cont	trols	
Resume On Ring	[Enabled]	
Resume On Gbe8111B 1	[Enabled]	
Resume On Gbe8111B 2	[Enabled]	← Select Screen
Resume On RTC Alarm	[Disabled]	↑↓ Select Item
Resume On Keyboard	[Specific Key]	+- Change Field
Specific Key for Power	r On	F1 General Help
Resume On Mouse	[Enabled]	F10 Save and Exit
Ac Loss State	[Off]	and the second

2.2.2.3 PCI PnP

The PCI PnP menu items allow you to change the advanced settings for PCI/PnP devices. The menu includes setting IRQ and DMA channel resources for either PCI/ PnP or legacy ISA devices, and setting the memory size block for legacy ISA devices.

Warning! Use caution when changing the settings of the PCI PnP menu items. Incorrect field values can cause the system to malfunction.

Clear NVRAM

> Clear NVRAM during system boot. The options: [No], [Yes].

Plug & Play O/S

When set to [No], BIOS configures all the devices in the system. When set to [Yes] and if you install a Plug and Play operating system, the operating system configures the Plug and Play devices not required for boot.

The options: [No] [Yes].

BIOS SETUP UTILITY Advanced		
Advanced PCI/PnP Setting		NO: Lets the BIOS configure all the
WARNING: Setting wrong valu sections may cause malfunction.	es in below system to	devices in the system. YES: Lets the
Clear NVRAM Plug 5 Play 0/S	[No]	operating system configure Plug and
PCI Latency Timer	[64]	not required for
Allocate IRQ to PCI VGA	[Yes]	boot if your
Palette Snooping	[Disabled]	system has a Plug
PCI IDE BusMaster	[Disabled]	and Play operating
OffBoard PCI/ISA IDE Card	[Auto]	system.

PCI Latency Timer

Allows you to select the value in units of PCI clocks for the PCI device latency timer register. The options: [32] [64] [96] [128] [160] [192] [224] [248].

Allocate IRQ to PCI VGA

When set to [Yes], BIOS assigns an IRQ to PCI VGA card if the card requests for an IRQ. When set to [No], BIOS does not assign an IRQ to the PCI VGA card even if requested. The options: [No] [Yes].

Advanced	IOS SETUP UTILITY	
Advanced PCI/PnP Setting	P4	YES: Assigns IRQ
WARNING: Setting wrong w sections may ca malfunction.	values in below nuse system to	card requests IRQ. NO: Does not assign IRQ to PCI
Clear NVRAM	[No]	VGA card even if
Plug & Play O/S	[NO]	TRO
PCI Latency Timer	[64]	
Allocate IRQ to PCT VGR	[Yes]	
Palette Snooping	[Disabled]	

Palette Snooping

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 latter can function correctly.

The options: [Disabled] [Enabled].

B IOS Advanced	SETUP UTILITY	
Advanced PCI/PnP Setting		ENABLED: informs
WARNING: Setting wrong valu sections may cause malfunction.	es in below system to	the PCI device that an ISA graphics device is installed in the
Clear NVRAM [No]		system so the
Plug & Play O/S	[No]	correctly.
PCI Latency Timer	[64]	corrected.
Allocate IRQ to PCI VGA	[Yes]	
Palette Snooping	[Disabled]	
PCI IDE BusMaster	[Disabled]	
OffBoard PCI/ISA IDE Card	[Auto]	← Select Screen

PCI IDE BusMaster the BIOS use PCI bus mastering for reading/writing to IDE device.

The options: [Disabled], [Enabled].

BIOS Advanced	SETUP UTILITY	
Advanced PCI/PnP Setting		ENABLED: BIOS uses
WARNING: Setting wrong values in below sections may cause system to malfunction.		 PCI bus mastering for reading / writing to IDE devices.
Clear NVRAM	[No]	
Plug & Play O/S	[No]	
PCI Latency Timer	[64]	
Allocate IRQ to PCI VGA	[Yes]	
Palette Snooping	[Disabled]	
PCI IDE BusMaster	[Disabled]	
OffBoard PCT/TSA TDE Card	[Auto]	- Salant Suraan

OffBoard PCI/ISA IDE Card

Allows you to set the PCI slot number.

The options: [Auto], [PCI Slot1], [PCI Slot2], [PCI Slot 3], [PCI Slot4], [PCI Slot5], [PCI Slot6].

Advanced PCI/PnP Setting		Some PCI IDE card
WARNING: Setting wrong val sections may caus malfunction. Clear NVRAM Plug & Play O/S PCI Latency Timer	[No] [No] [64]	PCI slot number that is holding the card. AUTO: Works for most PCI IDE cards.
Allocate IRQ to PCI VGA Palette Snooping PCI IDE BusMaster OffBoard PCI/ISA IDE Card IRQ3 IRQ4 IRQ5 IRQ7 IRQ9	Options Auto PCI Slot1 PCI Slot2 PCI Slot3 PCI Slot4 PCI Slot5 PCI Slot6	elect Screen Select Item hange Field General Help Save and Exit Exit

■ IRQ3,4,5,7,9,10,11,14,15

Allows you to specify IRQ that is available to be used by PCI/PnP or Legacy ISA device.

The options: [Available], [Reserved].

Advanced	DS SETUP UTILITY	
Advanced PCI/PnP Setting		Available:
WARNING: Setting wrong va sections may cau malfunction.	lues in below se system to	available to be used by PCI/PnP devices.
Clear NVRAM	[No]	Reserved:
Plug & Play O/S	[NO]	reserved for use
PCI Latency Timer	[64]	by Legacy ISA
Allocate IRQ to PCI VGA	[Yes]	device.
Palette Snooping	[Disabled]	Contraction of the local distance of the loc
PCI IDE BusMaster	[Disabled]	
OffBoard PCI/ISA IDE Card	[Auto]	and the second second
TRO3	[Available]	← Select Screen
IRQ4	[Available]	+- Change Field
IRQ5	[Available]	F1 General Help
IRQ7	[Available]	F10 Save and Exit
IRQ9	[Available]	ESC Exit

DMA Channel 0,1,3,5,6,7

DMA Channel PCI/PMP functions. The options: [Available], [Reserved].

B IOS Advanced	SETUP UTILITY	
OffBoard PCI/ISA IDE Card	[Auto]	
IRQ3	[Available]	
IRQ4	[Available]	
IRQ5	[Available]	
IRQ7	[Available]	
IRQ9	[Available]	
IRQ10	[Available]	
IRQ11	[Available]	
IRQ14	[Available]	
IRQ15	[Available]	
DMA Channel 9	[Available]	← Select Screen
DMA Channel 1	[Available]	↑↓ Select Item

Reserved Memory Size

Set the size of memory block to reserve for legacy ISA devices. The options: [Disabled], [16 K], [32 K], [64 K].

2.2.2.4 Chipset

CPU Configuration

A	dvanced	
Advanced	Chipset Setting	Configure CPU.
WARNING:	Setting wrong values in below sections may cause system to malfunction.	
► CB0 C	oufiguration	
Video	Function Configuration	
 Onboa 	rd Device	← Select Screen

- Hardware Prefetcher

Allows you to Enable or Disable the Hardware Prefetcher Feature. The options: [Enabled], [Disabled].

BIOS SETUP UTILI Advanced	ТҮ
Configure Advanced CPU Settings	This should be
Module Version:3F.03	enabled in order
Manufacturer: Intel Intel® Core ^{®4} 2 Duo CPU U7500 @ 1. Frequency : 1.06GHz FSB Speed : 533MHz Cache L1 : 64 KB Cache L2 : 2048 KB Ratio Actual value: 8	to enable or disable the Hardware prefetcher Disable Feature.
Hardware Prefetcher (finabled	1]
Adjacent Cache Line Prefetch [Enabled	← Select Screen

- Adjacent Cache Line Prefetch

Allows you to Enable/Disable the Adjacent Cache Line Prefetch Feature. The options: [Enabled], [Disabled].

BIOS SETUP Advanced	UTILITY
Configure Advanced CPU Settings	This should be
Module Version:3F.03	enabled in order
Manufacturer: Intel Intel® Core [™] 2 Duo CPU U7500 Frequency : 1.06GHz FSB Speed : 533MHz Cache L1 : 64 KB Cache L2 : 2048 KB Ratio Actual value: 8	to enable or disable the Adjacent Cache Line Prefetch Disable Feature.
Hardware Prefetcher [Er	abled]
Adjacent Cache Line Prefetch [Er	abled] ← Select Screen
Intel® Virtualization Tech [Er	abled] †↓ Select Item

- Intel Virtualization Tech

Enable / Disable the function of Intel Virtualization Tech. The options: [Enabled], [Disabled].

Advanced	
Configure Advanced CPU Settings Module Version:3F.03	When enabled, a VMM can utilize
Manufacturer: Intel Intel® Core ^{®4} 2 Duo CPU U750 Frequency : 1.06GHz FSB Speed : 533MHz Cache L1 : 64 KB Cache L2 : 2048 KB Ratio Actual value: 8	0 @ 1.066GHz Caps. Provided by Intel® Virtualization Tech. Note: A full reset is required to change the continue
Hardware Prefetcher [E	nabled]
Adjacent Cache Line Prefetch[EIntel® Virtualization Tech[E	nabled] ← Select Screen nabled] ↑↓ Select Item

Execute-Disable Bit Capability
 Set the XD feature flag value.
 The options: [Enabled], [Disabled].

BIOS SE Advanced	TUP UTILITY	
Configure Advanced CPU Setting Module Version:3F.03	S	When disabled, force the XD
Manufacturer: Intel Intel® Core ^{®#} 2 Duo CPU U Frequency : 1.06GHz FSB Speed : 533MHz Cache L1 : 64 KB Cache L2 : 2048 KB Ratio Actual value: 8	7500 @ 1.066GHz	feature flag to always return 0.
Hardware Prefetcher Adjacent Cache Line Prefetch Intel® Virtualization Tech Breatta-Dischle Bit Canability	[Enabled] [Enabled] [Enabled] [Enabled]	← Select Screen ↑↓ Select Item +- Change Field

- Core Multi-Processing

Allows you to Enable/Disable execution core of CPU die. The options: [Enabled], [Disabled].

B IOS SET Advanced	TUP UTILITY	
Configure Advanced CPU Settings Module Version:3F.03	s	When disabled, disable one
Manufacturer: Intel Intel® Core ^{®#} 2 Duo CPU U Frequency : 1.06GHz FSB Speed : 533MHz Cache L1 : 64 KB Cache L2 : 2048 KB Ratio Actual value: 8	7500 @ 1.066GHz	execution core of each CPU die.
Hardware Prefetcher Adjacent Cache Line Prefetch Intel® Virtualization Tech Execute-Disable Bit Capability	[Enabled] [Enabled] [Enabled] [Enabled]	← Select Screen †↓ Select Item +- Change Field F1 General Help

Intel® SpeedStepTM Tech

Allows Enable/Disable of GU3 function. The options: [Enabled], [Disabled].

BIOS SET Advanced	UP UTILITY	
Configure Advanced CPU Settings	nfigure Advanced CPU Settings Disable: Di	
Module Version:3F.03	dule Version:3F.03 GU3	
Manufacturer: Intel Intel® Core ^{®4} 2 Duo CPU U Frequency : 1.06GHz FSB Speed : 533MHz Cache L1 : 64 KB Cache L2 : 2048 KB Ratio Actual value: 8	7500 @ 1.066GHz	Enable: Enable GV3
Hardware Prefetcher	[Enabled]	← Select Screen
Adjacent Cache Line Prefetch	[Enabled]	↑↓ Select Item
Intel® Virtualization Tech	[Enabled]	+- Change Field
Execute-Disable Bit Capability	[Enabled]	F1 General Help
Core Multi-Processing	[Enabled]	F10 Save and Exit
Intel® SpeedStep ^{er} Tech	[Enabled]	ESC Erit

Video Function Configuration

A	BIOS SETUP UTILITY	
Advanced	Chipset Setting	Configure Video
WARNING:	Setting wrong values in below sections may cause system to malfunction.	Function.
CPU C	onfiguration Emotion Configuration	
USB COnboa	onfiguration rd Device	← Select Screen †↓ Select Item

DVMT Mode Select
 Select the DVMT Mode.
 The options: [Fixed Mode], [DVMT Mode].

Video Function Configuration		Options
DVMT Mode Select DVMT/FIXED Memory	[DVMT Mode] [256MB]	Fixed Mode DVMT Mode
Boot Display Device	[VBIOS-Default]	
Local Flat Panel Scaling	[Auto]	
Flat Panel Type	[Type 3 1024x768 18]	

- DVMT/FIXED Memory

The options: [128 MB], [256 MB].

BIOS SETUP UTILITY Advanced		
Video Function Configurat	ion	Options
DVMT Mode Select DVMT/FIXED Memory	[DVMT Mode] [256MB]	128MB 256MB
Boot Display Device Local Flat Panel Scaling Flat Panel Type	[VBIOS-Default] [Auto] [Type 3 1024x768 18]	

- Boot Display Device

The options: [VBIOS-Default], [CRT], [DVI], [CRT+DVI], [LVDS], [CRT+LVDS].

BIOS SETUP UTILITY Advanced		
Video Function Configurat	tion	Options
DVMT Mode Select DVMT/FIXED Memory	[DVMT Mode] [256MB]	VBIOS-Default CRT DVI
Boot Display Device Local Flat Panel Scaling Flat Panel Type	[VBIOS-Default] [Auto] [Type 3 1024x768 18]	CRT+DVI LVDS CRT+LVDS

 Local Flat Panel Scaling The options: [Auto], [No].

Advanced		
Video Function Configura	tion	Options
DVMT Mode Select DVMT/FIXED Memory	[DVMT Mode] [256MB]	
Boot Display Device Local Flat Panel Scaling Flat Panel Type	[VBIOS-Default] [Auto] [Type 3 1024x768 18]	

- Flat Panel Type

Flat Panel Type select.

BIOS SETUP UTILITY Advanced		
Video Function Configurat	ion	Options
DVMT Mode Select DVMT/FIXED Memory	[DVMT Mode] [256MB]	
Boot Display Device Local Flat Panel Scaling Flat Panel Type	[VBIOS-Default] [Auto] [Type 3 1024x768 18]	

The options:

- [Type 1 640 x 480 18bit auto] [Type 2 800 x 600 18bit auto] [Type 3 1024 x 768 18bit auto] [Type 4 1280 x 1024 18bit auto] [Type 5 1280 x 1024 24bit auto] [Type 6 1400 x 1050(2) 18bit auto] [Type 7 1600 x 1200 18bit auto] [Type 8 1280 x 768 18bit auto] [Type 9 1680 x 1050 18bit auto] [Type 10 1920 x 1200 18bit auto] [Type 11 1024 x 768(1) 18bit auto] [Type 12 1024 x 768(2) 18bit auto] [Type 13 1024 x 768(3) 18bit auto] [Type 14 1280 x 800 18bit auto] [Type 15 1280 x 600 18bit auto] [Type 16 2048 x 1536 18bit auto]
- USB Configuration

The items in this menu Allows you to change the USB-related features. Select an item then press <Enter> to display the configuration options.

USB Function

Allows you to enable or disable the USB function.

The options: [Disabled], [2 USB Ports], [4 USB Ports], [6 USB Ports], [8 USB Ports], [10 USB Ports].

USB Configuration		Options
Module Version - 2.24.2 USB Function USB 2.0 Controller USB Devices Enabled: None	-13.4 [H USB Ports] [Disabled]	Disabled 2 USB Ports 4 USB Ports 6 USB Ports 8 USB Ports 10 USB Ports

N	ote!
	自

The Module Version and USB Devices Enabled items show the autodetected values. If no USB device is detected, then item shows None.

- USB 2.0 Controller

Allows you to enable or disable the USB 2.0 controller. The options: [Disabled] [Enabled].

BIOS SETUP UTILITY Advanced		
USB Configuration		Options
Module Version - 2.24.2-13.4 USB Function [8 USB Ports] USB 2.0 Controller [Disabled]		Disabled Enabled
USB Devices Enabled: None Legacy USB Support	Options Disabled Enabled	
USB 2.0 Controller Me BIOS EHCT Hand-Off	Iknabi edi	

- USB Devices Enabled

The USB Devices Enabled items show the auto-detected values. If no USB device is detected, then item shows [None].

BIOS SETUP UTILITY Advanced		
USB Configuration		Options
Module Version - 2.24.2	2-13.4	
USB Function USB 2.0 Controller USB Devices Enabled. None	[8 USB Ports] [Disabled]	

- Legacy USB Support

Allows you to enable or disable support for USB devices on legacy operating system (OS). Setting to Auto allows the system to detect the presence of USB devices at startup. If detected, the USB controller legacy mode is enabled. If no USB device is detected, the legacy USB support is disabled.

The options: [Disabled], [Enabled], [Auto].

USB 2.0 Controller Mode

Allows you to configure the USB 2.0 controller in [HiSpeed (480 Mbps)] or [Full Speed (12 Mbps)]. The options: [FullSpeed], [HiSpeed].

USB Configuration		Options
Module Version - 2.24.2-13.4		FullSpeed
USB Function USB 2.0 Controller USB Devices Enabled: None	[8 USB Ports] [Disabled]	HiSpeed
Legacy USB Support USE 2.0 Controller Mode BIOS EHCI Hand-Off	[Enabled] [Full speed] [Enabled]	

- BIOS EHCI Hand-Off

Allows you to enable support for operating systems without an EHCI hand-off feature.

The options: [Disabled], [Enabled].

USB Configuration		Options
Module Version - 2.24.2-13.4 USB Function [8 USB Ports]		Disabled Enabled
USB 2.0 Controller USB Devices Enabled: None	[Disabled]	
Legacy USB Support USB 2.0 Controller Mode BIOS ENCI Hand-Off	[Enabled] [Full Speed] [Enabled]	

Note!

Do not disable the BIOS EHCI Hand-Off option if you are running a Windows® operating system with USB device.

 Hotplug USB FDD Support The options: [Disabled], [Auto].

		at a second state	
USB Configuration Module Version - 2.24.2-13.4		A dummy FDD	
		that will be	
USB Function USB 2.0 Controller USB Devices Enabled: None	[8 USB Ports] [Disabled]	associated with the hot plugged FDD later. Auto option creates this	
Legacy USB Support USB 2.0 Controller Mode BIOS EHCI Hand-Off Hotplug USB FDD Support	[Enabled] [Full Speed] [Enabled] [Auto]	dummy device only if there is no USB FDD present.	

Onboard Device

BIOS SETUP UTILITY Advanced		
Advanced C	hipset Setting	Configure USB
WARNING: S s m	etting wrong values in below ections may cause system to alfunction.	Function.
 CPU Con Video F USB Con Unboard 	figuration function Configuration figuration Device	← Select Screen

- Serial Port 1 Address

Allows you to select the Serial Port1 base address.

Configuration options: [Disabled] [3F8/IRQ4] [2F8/IRQ3] [3E8/IRQ4] [2E8/IRQ3].

BIOS SETUP UTILITY Advanced		
Serial Porti Address	[3F8/IRQ4]	Allows BIOS to
Serial Port2 Address	[2F8/IRQ3]	Select Serial
Serial Port3 Address	[3E8]	Portl Base
Serial Port3 IRQ	[5]	Addresses.

- Serial Port 2 Address

Allows you to select the Serial Port2 base address.

The options: [Disabled], [3F8/IRQ4], [2F8/IRQ3], [3E8/IRQ4], [2E8/IRQ3].

BIOS SETUP UTILITY Advanced		
		Allows BIOS to
Serial Port1 Address	[3FB/IRQ4]	Select Serial
Serial Port2 Address	[2F8/IRQ3]	Port2 Base
Serial Port3 Address	[3E8]	Addresses.
Serial Port3 IRQ	[5]	and the second sec
Serial Port4 Address	[2E8]	
Serial Port4 IRQ	[10]	

Serial Port 3 Address

Allows you to select the Serial Port3 base address.

The options: [Disabled], [3E8], [2E8].

BIOS SETUP UTILITY Advanced			
Serial Portl Address	[3FB/IRQ4]	Allows BIOS to Select Serial	
Serial Port2 Address	[2F8/IRQ3]	Port3 Base	
Serial Port3 IRQ	[5]	Auuresses.	
Serial Port4 Address	[2E8]		

- Serial Port 3 IRQ

Allow BIOS to select Serial Port 3 IRQ. The options: [3], [4], [5], [10].

BIOS SETUP UTILITY Advanced		
		Allows BIOS to
Serial Port1 Address	[3FB/IRQ4]	Select Serial
Serial Port2 Address	[2F8/IRQ3]	Port3 IRQ.
Serial Port3 Address	[3E8]	
Serial Port3 IRQ	[5]	
Serial Port4 Address	[2E8]	
Serial Port4 IRQ	[10]	

Serial Port 4 Address

Allows you to select the Serial Port4 base address.

The options: [Disabled], [3E8], [2E8].

BIOS SETUP UTILITY Advanced			
		Allows BLOS to	
Serial Port1 Address	[3FB/IRQ4]	Select Serial	
Serial Port2 Address	[2F8/IRQ3]	Port4 Base	
Serial Port3 Address	[3E8]	Addresses.	
Serial Port3 IRQ	[5]		
Serial Port4 Address	[2E8]		
Serial Port4 IRQ	[10]		

Serial Port 4 IRQ
 Allow BIOS to select Serial Port 4 IRQ.
 The options: [3], [4], [5], [10].

BIOS SETUP UTILITY Advanced			
		Allows BIOS to	
Serial Port1 Address	[3FB/IRQ4]	Select Serial	
Serial Port2 Address	[2F8/IRQ3]	Port4 IRQ.	
Serial Port3 Address	[3E8]	and the second second	
Serial Port3 IRQ	[5]		
Serial Port4 Address	[2E8]		
Serial Port4 IRQ	[10]		
HAD Controller	[Enabled]		

- HAD Controller

The options: [Enabled], [Disabled].

BIOS SETUP UTILITY Advanced		
Sorial Borti Address	[3FB/TRO4]	
Serial Port2 Address	[2F8/IRQ3]	
Serial Port3 Address	[3E8]	
Serial Port3 IRQ	[5]	
Serial Port4 Address	[2E8]	
Serial Port4 IRQ	[10]	
HAD Controller	[Enabled]	

- Audio Amplifier

The options: [Enabled], [Disabled].

BIOS SETUP UTILITY Advanced			
Serial Port1 Address	[3FB/IRO4]		
Serial Port2 Address	[2F8/IRQ3]		
Serial Port3 Address	[3E8]		
Serial Port3 IRQ	[5]		
Serial Port4 Address	[2E8]		
Serial Port4 IRQ	[10]		
HAD Controller	[Enabled]		
Audio Amplifier	[Enabled]		

Amplifier Gain (dB)

The options: [31.8 dB], [27.2 dB], [21.2 dB], [15.3 dB].

BIOS SETUP UTILITY Advanced		
Sovial Dorti Address	[200 /TRO/1]	
Serial Port2 Address	[2F8/IR03]	
Serial Port3 Address	[3E8]	
Serial Port3 IRQ	[5]	
Serial Port4 Address	[2E8]	
Serial Port4 IRQ	[10]	
HAD Controller	[Enabled]	
Audio Amplifier	[Enabled]	
Amplifier Gain (dB)	[15.3 dB]	

- GeB8111B_1/2

The options: [Auto], [Enabled], [Disabled].

		Options
Serial Port1 Address	[3FB/IRQ4]	
Serial Port2 Address	[2F8/IRQ3]	Auto
Serial Port3 Address	[3E8]	Enabled
Serial Port3 IRQ	[5]	Disabled
Serial Port4 Address	[2E8]	
Serial Port4 IRQ	[10]	
HAD Controller	[Enabled]	
Audio Amplifier	[Enabled]	
Amplifier Gain (dB)	[15.3 dB]	
Geb81118 1	[Auto]	
Geb8111B 2	[Auto]	en Calante Com

2.2.3 HW Monitor

BIOS SETUP UTILITY					
Main Advar	nced HW Monito	r <mark>TPM</mark>	Boot	Exit	
HW Monitor					Options
CPU Temperatu CPUFANO Speed	ire : I :	48°C/118°F 2393 RPM		Op Si Pe	timal Mode lent Mode rformance Mode
Vcore 3.3V 12V +5V CPU FAN Profi	: : :1e Mode	1.240 V 3.328 V 12.144 V 5.171 V Performa	nice Nodel		
				¢ †4 +- F1 F1 ES	Select Screen Select Item Change Option General Help Ø Save and Exit C Exit
v02	2.61 (C) Copyright	1985-2006,	America	n Megatr	ends, Inc.

2.2.3.1 CPU Temperature

The onboard hardware monitor automatically detects and displays the CPU temperatures. Select [Ignored] if you do not wish to display the detected temperatures.
2.2.3.2 AUXFAN Speed

The onboard hardware monitor automatically detects and display the CPU fan speed in rotations per minute (RPM). If the an is not connected to the motherboard, the field shows N/A.

2.2.3.3 Vcore / 3.3 V / 12 V / +5 V

The onboard hardware monitor automatically detects the voltage output through the onboard voltage regulators. Select [Ignored] if you do not wish to display these items.

2.2.3.4 CPU FAN Profile Mode

Allows you to select the CPU FAN profile mode. The options: [Optional Mode], [Silent Mode]], [Performance Mode].

2.2.4 TPM

TPM		Enable/Disable
TCG/TEM SUPPORT [Yes]	1.1/1.2) supp in BIOS.
Execute TPM Command [Don't change] TPM Enable/Disable Status [Disabled] TPM Owner Status [UnOwned]		
		← Select Screen †↓ Select Item +- Change Field F1 General Help F10 Save and Exit ESC Exit

2.2.4.1 TCG/TPM Support

Enable/Disable TPM TCG support function. The options: [Yes], [No].

TCG/TPM SUPPORT [Yes] TCG/TPM SUPPORT [Yes] Execute TPM Command [Don't change] TPM Enable/Disable Status [Disabled] TPM Owner Status [UnOwned]	TPM		Enable/Disable
Execute TPM Command [Don't change] TPM Enable/Disable Status [Disabled] TPM Owner Status [UnOwned]	ICG/IPM SUPPORT [Yes]	1.1/1.2) supp in BIOS.
TPM Enable/Disable Status [Disabled] TPM Owner Status [UnOwned]	Execute TPM Command	[Don't change]	
Ontions	TPM Enable/Disable Status TPM Owner Status	[Disabled] [UnOwned]	
Operons		otions	
No	No		
			← Select Screen

Main Advanced	BIOS SETUP UTILITY HW Monitor TPM Boot	Exit
трм		Enable/Disable
TCG/TPM SUPPORT	[No]	TPM TCG (TPM 1.1/1.2) supp in BIOS.

2.2.4.2 Execute TPM Command

Enable/Disable Execute TPM command. The options: [Don't change], [Disabled], [Enabled].

TPM	_	Enable (Activate)
TCG/TPM SUPPORT	[Yes]	(Deactivate) Command to TPM.
Execute TPM Command [Don't change] TPM Enable/Disable Status [Disabled] TPM Owner Status [DunOwned]		
Opt Don't char Disabled Enabled	nge	← Select Screen

2.2.5 Boot

The Boot menu items allow you to change the system boot options. Select an item then press <Enter> to display the sub-menu.

Main	Advanced	BIOS SETUP UTILITY HW Monitor TPM Boot	Exit
Bootin	g Setting		
► Sec ► Boo	nrity t Settings	Configuration	
			← Select Screen ↑↓ Select Item +- Change Field Enter Go to Sub screen F1 General Help F10 Save and Exit ESC Exit
V(02.61 (C) C	Copyright 1985-2006, Ameri	ican Megatrends Inc.

2.2.5.1 Security

The security menu items allow you to change the system security settings. Select an item then press <Enter> to display the configuration options.



Supervisor / User Password

The Supervisor/User Password item on top of the screen shows the default Not Installed. After you set a password, this item shows Installed.

BIOS SETUP UTITATY Boot	
Security Settings	Install or Change
Supervisor Password : Not Installed	the password.
User Password :Not Installed	

Change User Password

Select this item to set or change the Supervisor/User Password.

- 1. Select the Change Supervisor/User Password item and press <Enter>
- 2. From the password box, type a password composed of at least six letters and/or number, the press <Enter>.

Security Settings		Install or Change
Supervisor Passwor User Password Chauge User Passwo	d :Not Installed :Not Installed	the password.
Boot Sector Virus		

3. Confirm the password when prompted.

The message "Password Installed" appears after you successfully set your password.

To clear the supervisor/user password, select the change Supervisor/User Password then press <Enter>. The message "Password Uninstalled" appears.

After you have set a supervisor password, the other items appear to Allows you to change other security settings.

Note!

If you forget your BIOS password, you can clear it by erasing the CMOS Real Time Clock (RTC) RAM.

Boot Sector Virus Protection
 Set Enable/Disabled Boot Sector Virus protection.
 The options: [Enabled], [Disabled].

12 1-1 12
ble/Disable
t sector virus tection.

2.2.5.2 Boot Setting Configuration

Main	Advanced	BIOS S HW Monitor	SETUP (TPM	Boot	Exit	
Bootin	g Setting			-		
► Sec	mrity Mt Settings	Configurati	on			

Quick Boot

Enable this item allows the BIOS to skip some power on self test (POST) while booting to decrease the time needed to boot the system. When set to [Disabled], BIOS performs all the POST items. The options: [Disabled], [Enabled].

В	IOS SETUP UTILITY Boot	
Boot Setting Configurati	Allows BIOS to	
Qnick Boot Quiet Boot	[Enabled] [Disabled]	tests while booting. This will
Bootup Num-Lock	[On]	decrease the time
Wait For 'F1' If Error Gbe8111B LAN Boot	[Enabled] [Enabled]	the system.

Quiet Boot

Allows you to display Normal POST message or OEM logo. The options: [Disabled], [Enabled].

в	IOS SETUP UTILITY Boot	
Boot Setting Configuration		Disabled: Displays
Quick Boot Quiet Boot	[Enabled] [Disabled]	normal POST messages. Enabled: Displays
Bootup Num-Lock Wait For 'F1' If Error Gbe8111B LAN Boot	[On] [Enabled] [Enabled]	OEM logo instead of POST message.

Bootup Num-Lock

Allows you to select the power-on state for the NumLock. The options: [Off], [On].

В	IOS SETUP UTILITY Boot	
Boot Setting Configuration		Select Power-on
Quick Boot Quiet Boot	[Enabled] [Disabled]	state for NumLock.
Wait For 'F1' If Error Gbe8111B LAN Boot	[Enabled] [Enabled]	

Wait for 'F1' If Error

When set to Enabled, the system waits for the F1 key to be pressed when error occurs. The options: [Disabled], [Enabled].

	BIOS SETUP UTILITY Boot	
Boot Setting Configuration		What for F1 key
Quick Boot Quiet Boot	[Enabled] [Disabled]	error occurs.
Bootup Num-Lock Wait For 'F1' If Error Gbe8111B LAN Boot	[On] [Enabled] [Enabled]	

Gbe8111B LAN Boot

Select Enable or Disabled Gbe8111B LAN Boot.

B	IOS SETUP UTILITY Boot	
Boot Setting Configurati	lon	Options
Quick Boot Quiet Boot	[Enabled]	Disabled
Bootup Num-Lock [On]		LIIADIEU
Wait For 'Fl' If Error GbeëlliB LAN Boot	[Enabled] [Enabled]	

2.2.6 Exit

This Exit menu items allow you to load the optimal or failsafe default value for the BIOS items, and save or discard your changes to the BIOS items.

Exit Options	Exit system setup
Save Changes and Exit Discard Changes and Exit Discard Changes	changes. F10 key can be
Load Optimal Defaults Load Failsafe Defaults	operation.
	 ← Select Screen ↑↓ Select Item Enter Go to Sub screen F1 General Help F10 Save and Exit



Press <ESC> does not immediately exit this menu. Select on of the options from this menu or <F10> from the legend bar to exit.

2.2.6.1 Save Changes and Exit

Once you are finished making your selections, choose this option from the Exit menu to ensure the values you selected are saved to the CMOS RAM. An onboard backup battery sustains the CMOS RAM so it stays on even when the PC is turned off. When you select this option, a confirmation window appears. Select [OK] to save change and exit.

Exit Options		Exit system setup	
Save Ch	anges and Exit	changes.	
Discard	Changes and Exit	and a second sec	
Discard Changes		F10 key can be	
I and Ontinal Defaults		used for this	
Load Fa	ilsafe Defaults	operation	
	the second s	hardinale	
	Save configuration changes and exit setup? Scre		
		screen	

2.2.6.2 Discard Changes and Exit

Select this option only if you do not want to save the changes that you made to the setup program. If you made changes to fields other than System Date, System time, and Password, the BIOS asks for a confirmation before exiting.

Exit Opt	ions	Exit system setup
Save Changes and Exit		any changes.
Discard Changes and Exit		
Discard Changes		ESC key can be
Load Optimal Defaults		sumad from Alaba
Load Opt	imal Defaults	used for this operation.
Load Opt Load Fai	imal Defaults Isafe Defaults	used for this operation.
Load Opt Load Fai	imal Defaults Isafe Defaults Discard changes and exit setup?	used for this operation.
Load Opt Load Fai	imal Defaults Isafe Defaults Discard changes and exit setup?	used for this operation.

2.2.6.3 Discard Changes

This option allows you to discard the selections you made and restore the previously saved values. After selecting this option, a confirmation appears. Select [OK] to discard any changes and load the previously saved values.

Exit Options	Discards changes
Save Changes and Exit Discard Changes and Exit Discard Changes	any of the setup questions. F7 key can be
Load Optimal Default	used for this operation.
Load Failsafe Defaul Discard changes ?	

2.2.6.4 Load Optimal Defaults

This option allows you to load the optimal default values for each of the parameters on the Setup menus. When you select this option or if you press <F5>, a confirmation window appears. Select [OK] to load optimal default values. Select [Save Change and Exit] or make other changes before saving the values to the non-volatile RAM.

Exit Options		Load Optimal
Save Cha Discard (Discard (Load Opt Load Fai	nges and Exit Changes and Exit Changes Umal Defaults Lsafe Defaults	for all the setup questions. F9 key can be used for this operation.

2.2.6.5 Load Failsafe Defaults

This option allows you to load the failsafe default values for each of the parameters on the Setup menus. When you select this option or if you press <F5>, a confirmation window appears. Select [OK] to load failsafe default values.

LATE OPETONS	Load fallsale
Save Changes and Exit Discard Changes and Exit Discard Changes	for all the setup questions. F8 key can be
Load Optimal Defaults Load Failsafe Defaults	used for this operation.
[OK] [Cancel]	← Select Screen ↑↓ Select Item Enter Go to Sub screen F1 General Help
[OK] [Cancel]	



Specifications

A.1 Specifications Summary

Table A.	1: All	MB-256 Specification Summary
	1	Supports Intel socket P Core 2 Duo / Core Solo mobile CPU with 65nm
		process technology
	2	Intel GME965 Chipset
	3	Two 200-pin SODIMMs sockets up to 4GB Dual Channel DDR2 533/667 SDRAM
	4	Intel Graphics Media Accelerator X3100
Features	5	DVI, Dual Channel 18/24-bit LVDS
i catales	6	Realtek ALC888 5.1+2 CH Audio (5 W x 2-CH Amplified) with Dual Independent Audio Streams
	7	Dual Gigabit Lan Realtek RTL8111B
	8	Gigabit LAN Realtek RTL8111B
	9	One PCI slot
	10	4 COM,10 USB 2.0, 3 SATA TPM INFINEON SLB9635TT Module Onboard (Optional)
System		
CPU		Supports Intel socket P Core 2 Duo / Core Solo mobile CPU with 65nm process technology
FSB		533/800 MHz
BIOS		AMI 16 Mb SPI BIOS
System Ch	ipset	Intel GME965/ICH8M
I/O Chipse	t	Winbond W83627DHG-A
Memory		Two 200-pin SODIMM sockets support up to 4 GB Dual Channel DDR2 533/667 SDRAM
SSD		One CompactFlash Type I/II socket
Watchdog	Timer	Reset: 1 sec.~255 min. and 1 sec. or 1 min./step
H/W Status Monitor	6	Monitoring CPU temperature, voltage, and cooling fan status. Auto throt- tling control when CPU is overheat
Expansion	Slots	One PCI slot (PCI Rev. 2.2 compliant) supports 3 PCI master
S3		S3 Support
Smart Fan Control		Yes
I/O		
MIO		1x EIDE, 3 x SATA, 10 x USB, 4 x RS232, 1 x K/B, 1 x Mouse, (COM1~4 with 5 V and/or 12 V Power output)
USB		10 x USB 2.0
DIO		8-bit General Purpose I/O for DI and DO
Internal I/O		3 x USB connectors support additional 6 USB ports 1 x 20-pin ATX Power connector,1 x IDE 40-pin connector for two devices 2 x COM port header,3 x SATA connectors,1 x Front panel audio connector 1 x Audio amplifier connector (Optional),1 x System panel connector 1 x LVDS connector,1 x Inverter Power connector,1 x CPU Fan connector 1 x System Fan connector,1 x Digital IO header 1 x SPDIF Out connector reserved
Back Pane		1 x PS/2 Keyboard,1 x PS/2 Mouse,2 x RS-232,1 x VGA port,1 x DVI port 4 x USB 2.0/1.1, 2 x LAN RJ45 Port (one existed, another option) 5.1 + 2 CH Audio I/O (3 jacks)

Table A.1: AIMB-256 S	pecification Summary
-----------------------	----------------------

Display

Chipset	Intel Graphics Media Accelerator X3100
Display Memory	Intel DVMT 4.0 supports 384 MB video memory
Resolution	2048 x 1536 @ 32 bpp (@ 60 Hz)
Dual Display	CRT + LVDS, or CRT + DVI-D
LVDS	Dual-channel 24-bit LVDS
DVI	Chrontel CH7307C DVI transmitter up to 165M pixels/second
Audio	
	Realtek ALC888 Audio Code
	5.1+2 ch. with two independent audio stream
Audio Interface	Mic in, Line in, Line out
Audio Amplifier (Optional)	TPA3005D2 Stereo 5 Watt per channel
Ethernet	
LAN1	Realtek RTL8111B PCI-E Gigabit Ethernet Controller
LAN2	Realtek RTL8111B PCI-E Gigabit Ethernet Controller (optional)
Mechanical & E	nvironmental
Power ATX Type	
Operating Temperature	0 ~ 60° C (32 ~ 140° F)
Operating Humidity	0% ~ 90% relative humidity, non-condensing
Size (L x W)	6.69" x 6.69" (170 mm x 170 mm)
Weight	0.88 lbs (0.4 Kg)

* Specifications are subject to change without notice.

A.2 Block Diagram



Figure A.1 Block Diagram





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Please verify specifications before quoting. This guide is intended for reference purposes only.

All product specifications are subject to change without notice.

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