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Version 1.0

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Federal Communications Commission (FCC)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment onto an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

Shielded interconnect cables and a shielded AC power cable must be employed with this equipment to ensure compliance with the pertinent RF emission limits governing this device. Changes or modifications not expressly approved by the system's manufacturer could void the user's authority to operate the equipment.

Declaration of Conformity

This device complies with part 15 of the FCC rules. Operation is subject to the following conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

This device is in conformity with the following EC/EMC directives:

- ❑ **EN 55022** Limits and methods of mesurement of radio disturbance characteristics of information technology equipment
- ❑ **EN 61000-3-2** Disturbances in supply systems caused
- ❑ **EN 61000-3-3** Disturbances in supply systems caused by household appliances and similar electrical equipment " Voltage fluctuations"
- ❑ **EN 55024** Information technology equipment-Immunity characteristics-Limits and methods of measurement
- ❑ **EN 60950** Safety for information technology equipment including electrical business equipment
- ❑ **CE marking** CE

Canadian Department of Communications

This class B digital apparatus meets all requirements of the Canadian Interference-causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Réglement sur le matériel brouilieur du Canada.

About the Manual

The manual consists of the following:

Chapter 1 **Introducing the Motherboard**	Describes features of the motherboard.	⇨ page 1
Chapter 2 **Installing the Motherboard**	Describes installation of motherboard components.	⇨ page 7
Chapter 3 **Using BIOS**	Provides information on using the BIOS Setup Utility.	⇨ page 23
Chapter 4 **Trouble Shooting**	Provides basic trouble shooting tips.	⇨ page 43

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Chapter 1
Introducing the Motherboard

Introduction

Thank you for choosing the **VX900-I2** motherboard. This motherboard is a high performance, enhanced function motherboard with onboard **VIA® Eden X2 U4200/ VIA® Nano Single Core U3300 Processor**.

This motherboard is based on **VIA® VX900** Express Chipset for best desktop platform solution. It supports up to **8 GB** of system memory with single channel **DDR3 1066 MHz**. It also supports one PCIEX8 slot and one mini PCIE slot.

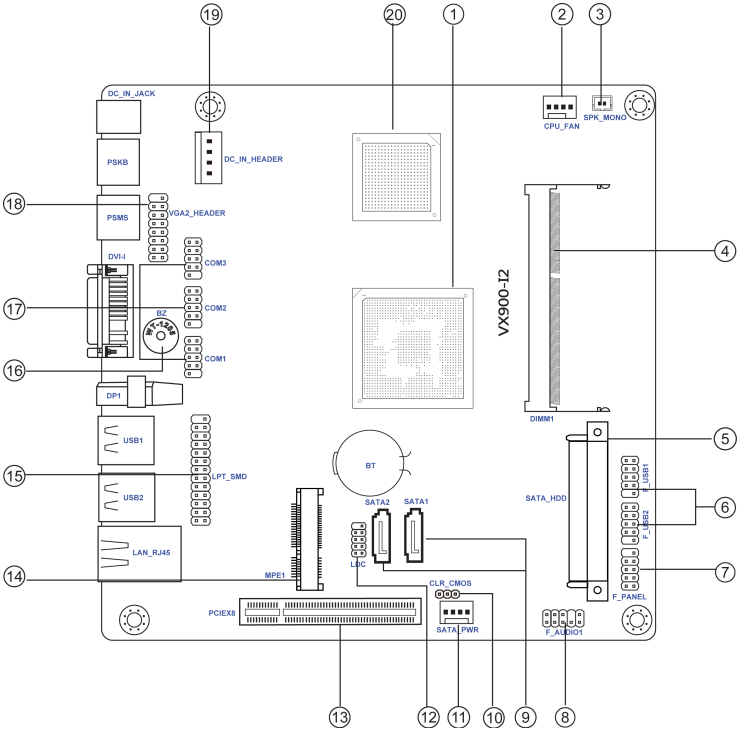
It implements an EHCI compliant interface that provides eight USB 2.0 ports (four USB 2.0 ports and two USB 2.0 headers support additional four USB 2.0 ports). This motherboard integrates a Serial-ATA host controller, supporting two SATA ports with maximum transfer rate up to 3Gb/s each and one Half-Slim SATA supports up 6Gb/s.

The motherboard is equipped with advanced full set of I/O ports in the rear panel, including one PS/2 mouse connector, one PS/2 keyboard connector, one display port, one DVI-I port, four USB 2.0 ports, one LAN connector, and one DC_IN jack.

Specifications

CPU	• Onboard VIA® Eden X2 Dual Core U4200 1GHz/VIA® Nano Single Core U3300 1.2GHz processor • Supports FSB 800MHz
Chipset	• VIA® VX900 Chipset
Memory	• Single-channel DDR3 SO-DIMM memory architecture • 1 x 204-pin DDR3 SO-DIMM sockets support up to 8 GB • Supports DDR3 1066 MHz DDR3 SDRAM *Note: Please go to ECS website for the latest Memory support list.*
Expansion Slots	• 1 x PCIEX8 slot • 1 x Mini PCIE slot
Storage	• Supported by VIA® VX900 Express Chipset - 2 x Serial ATA 3Gb/s devices - 1 x Half-Slim SATA connector
Audio	• Realtek ALC269 - 2+2 Channel High Definiton Audio Codec - Compliant with HD audio specification
LAN	• Realtek 8111E Gigabit Lan - 10/100/1000 Fast Ethernet Controller - Wake-on-LAN and remote wake-up support
Rear Panel I/O	• 1 x PS/2 keyboard connector • 1 x PS/2 mouse connector • 1 x DVI-I port • 1 x Display port • 4 x USB 2.0 ports • 1 x RJ45 LAN connector • 1 x DC_IN jack
Internal I/O Connectors & Headers	• 1 x 4-pin DC_IN header • 1 x 4-pin CPU_FAN connector • 1 x 4-pin SATA_PWR connector • 2 x USB 2.0 headers support additional four USB 2.0 ports • 2 x Serial ATA 3Gb/s connectors • 1 x Half-Slim SATA connector • 3 x COM headers • 1 x LDC header • 1 x VGA header • 1 x Front Panel audio header • 1 x Front Panel switch/LED header • 1 x Mono Speaker connector • 1 x Parallel port header (LPT) • 1 x CLR_CMOS header
Form Factor	• Mini-ITX Size, 170mm x 170mm

Motherboard Components



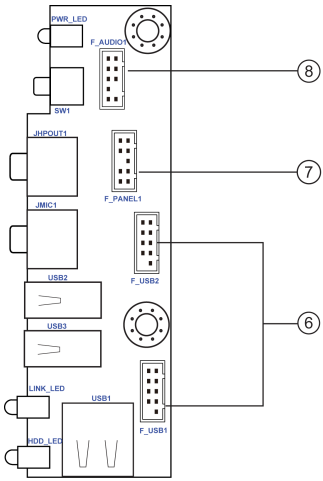
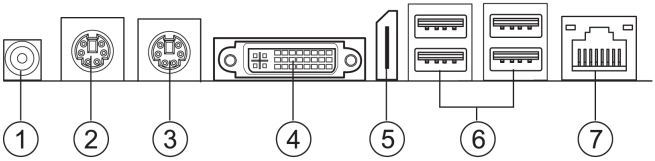


Table of Motherboard Components

LABEL	COMPONENTS
1. CPU	Onboard VIA® Eden X2 U4200/VIA® Nano Single Core U3300
2. CPU_FAN	4-pin CPU cooling fan connector
3. SPK_MONO	Mono Speaker header
4. DIMM_1	204-pin DDR3 Module slot
5. SATA_HDD	Half-Slim SATA connector
6. F_USB1~2	Front panel USB 2.0 headers
7. F_PANEL	Front panel switch/LED header
8. F_AUDIO	Front panel audio header
9. SATA1~2	Serial ATA 3.0 Gb/s connectors
10. CLR_CMOS	Clear CMOS jumper
11. SATA_PWR	4-pin SATA power connector
12. LDC	Debug card header - for factory use only
13. PCIEX8	PCI Express x8 slot
14. MPE1	MINI PCI Express slot
15. LPT_SMD	Printer Header
16. BZ	Buzzer
17. COM1~3	Onboard serial port headers
18. VGA2_HEADER	VGA header
19. DC_IN_HEADER	DC in header
20. NB	VX900

I/O Ports



1. DC_IN jack
Connect the power adapter to this jack.

2. PS/2 Keyboard(purple)
Use this port to connect a PS/2 keyboard.

3. PS/2 Mouse(green)
Use this port PS/2 port to connect a PS/2 mouse.

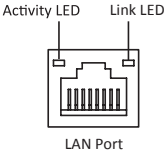
4. DVI-I Port
You can connect the display device to the DVI-I port.

5. DP Port
Use this port to connect the display device.

6. USB 2.0 Ports
Use the USB 2.0 ports to connect USB 2.0 devices.

7. LAN Port
Connect an RJ-45 jack to the LAN port to connect your computer to the Network.

LAN LED	Status	Description
Activity LED	OFF	No data
	Orange blinking	Active
Link LED	OFF	No link
	Green	Link



Memo

Chapter 2
Installing the Motherboard

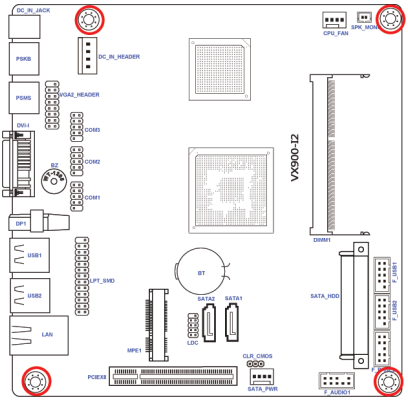
2-1. Safety Precautions

Follow these safety precautions when installing the motherboard:

- Wear a grounding strap attached to a grounded device to avoid damage from static electricity.
- Discharge static electricity by touching the metal case of a safely grounded object before working on the motherboard.
- Leave components in the static-proof bags.
- Always remove the AC power by unplugging the power cord from the power outlet before installing or removing the motherboard or other hardware components.

2-2. Installing the motherboard in a Chassis

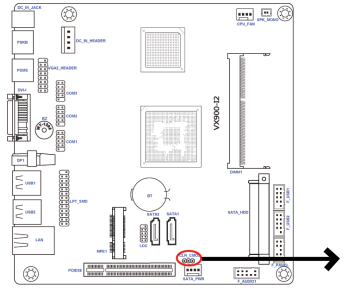
This motherboard carries a Mini ITX form factor of 170 x 170 mm. Choose a chassis that accommodates this from factor. Make sure that the I/O template in the chassis matches the I/O ports installed on the rear edge of the motherboard. Most system chassis have mounting brackets installed in the chassis, which corresponds to the holes in the motherboard. Place the motherboard over the mounting brackets and secure the motherboard onto the mounting brackets with screws.

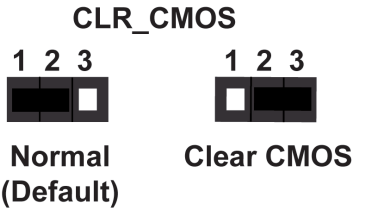


Do not over-tighten the screws as this can stress the motherboard.

2-3. Checking Jumper Settings

The following illustration shows the location of the motherboard jumpers. Pin 1 is labeled.





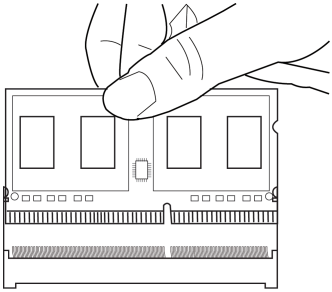
To avoid the system instability after clearing CMOS, we recommend users to enter the main BIOS setting page to "Load Default Settings" and then "Save and Exit Setup".

2-4. Installing Hardware

2-4-1. Installing Memory Modules

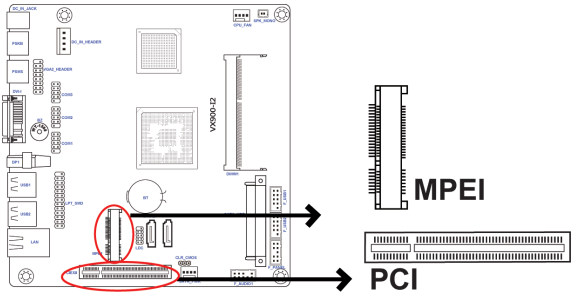
- This motherboard accommodates two memory modules. It can support one 204-pin DDR3 1066.
- Do not remove any memory module from its antistatic packaging until you are ready to install it on the motherboard. Handle the modules only by their edges. Do not touch the components or metal parts. Always wear a grounding strap when you handle the modules.
- You must install one module. Total memory capacity is 8 GB.
- Refer to the following to install the memory modules.

Install the DIMM module into the slot and press it firmly down until it seats correctly. Check that the cutouts on the DIMM module edge connector match the notches in the DIMM slot.



2-4-2. Installing Add-on Cards

The slots on this motherboard are designed to hold expansion cards and connect them to the system bus. Expansion slots are a means of adding or enhancing the motherboard's features and capabilities. With these efficient facilities, you can increase the motherboard's capabilities by adding hardware that performs tasks that are not part of the basic system.



MPE1 Slots The mini PCI Express x1 slot is for extending usage. It supports a full-card.

PCIEX8 Slot The PCI Express x8 slot is fully compliant to the PCI Express Base Specification revision 2.0.

Before installing an add-on card, check the documentation for the card carefully. If the card is not Plug and Play, you may have to manually configure the card before installation.

Follow these instructions to install an add-on card:

1 Remove a blanking plate from the system case corresponding to the slot you are going to use.

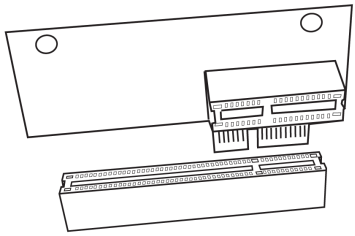
2 Install the edge connector of the add-on card into the expansion slot. Ensure that the edge connector is correctly seated in the slot.

3 Secure the metal bracket of the card to the system case with a screw.

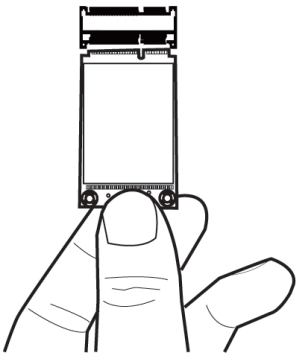
1. For some add-on cards, for example graphics adapters and network adapters, you have to install drivers and software before you can begin using the add-on card.

Please refer the following illustrations to install the add-on card:

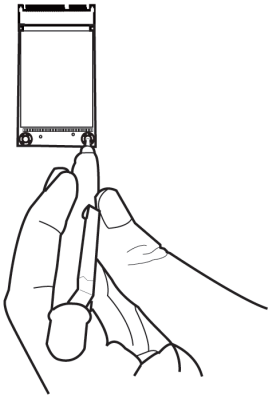
Install the Raising Card in the PCIEX8 slot



Insert a Mini SATA (mSATA) card into the MPEI Slot.



Picture 1

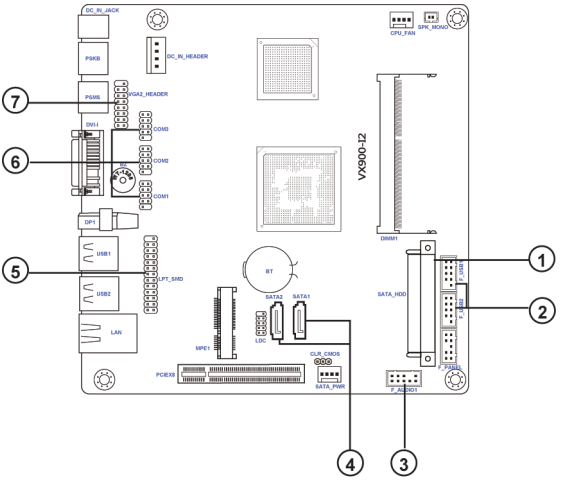


Picture 2

** For reference only*

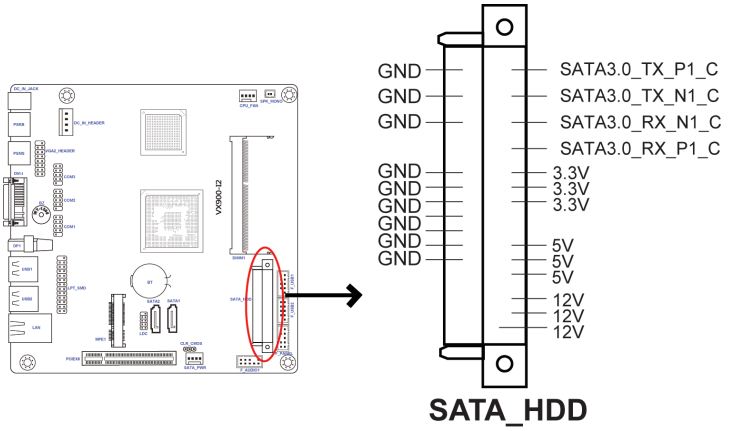
2-4-3. Connecting Optional Devices

Refer to the following for information on connecting the motherboard's optional devices:



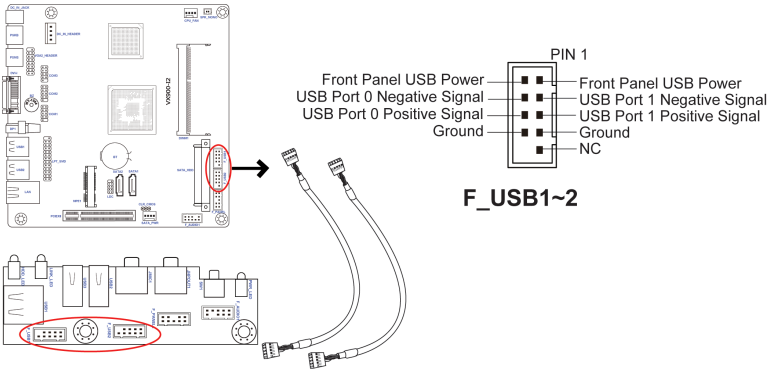
No.	Components	No.	Components
1	SATA_HDD	5	LPT
2	F_USB1~2	6	COM1~3
3	F_AUDIO1	7	VGA2_HEADER
4	SATA1~2	——	——

1. SATA_HDD: Half-Slim SATA Connector



2. F_USB1~2: Front Panel USB 2.0 headers

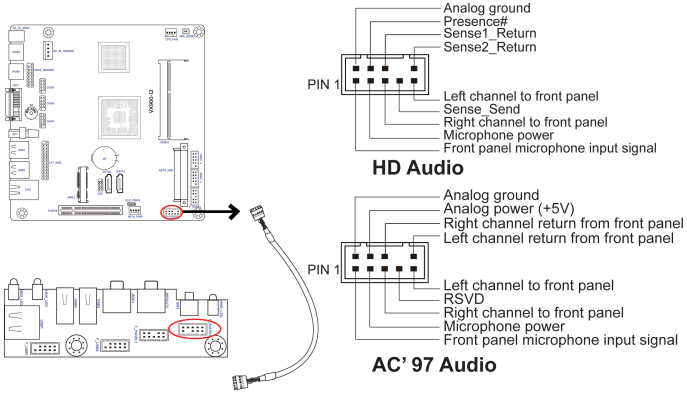
The motherboard has two USB 2.0 headers supporting four USB 2.0 ports. Additionally, some computer cases have USB ports at the front of the case. If you have this kind of case, use auxiliary USB connector to connect the front-mounted ports to the motherboard.



Please make sure that the USB cable has the same pin assignment as indicated above. A different pin assignment may cause damage or system hang-up.

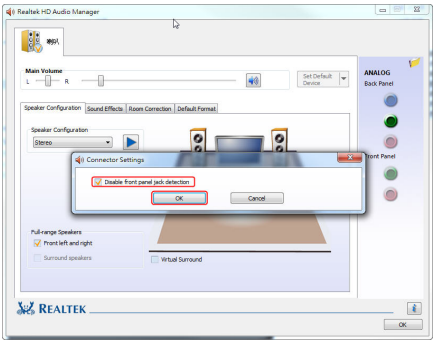
3. F_AUDIO1: Front Panel Audio Header

The front panel audio header allows the user to install auxiliary front-oriented microphone and line-out ports for easier access. This header supports HD audio by default. If you want connect an AC' 97 front panel audio to HD onboard headers, please set as below picture.



AC' 97 Audio Configuration: To enable the front panel audio conne-ctor to support AC97 Audio mode.

If you use AC' 97 Front Panel, please tick off the option of "Disabled Front Panel Detect ". If you use HD Audio Front Panel, please don' t tick off "Disabled Front Panel Detect ".



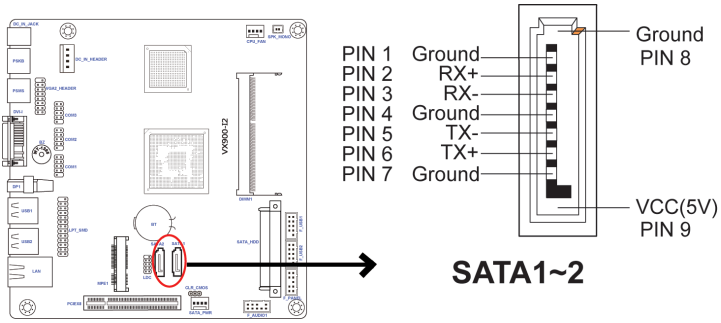
** For reference only*

If you use AC' 97 Front Panel, please don' t tick off "Using Front Jack Detect ". If you use HD Audio Front Panel, please tick off the option of "Using Front Jack Detect ".

** For reference only*

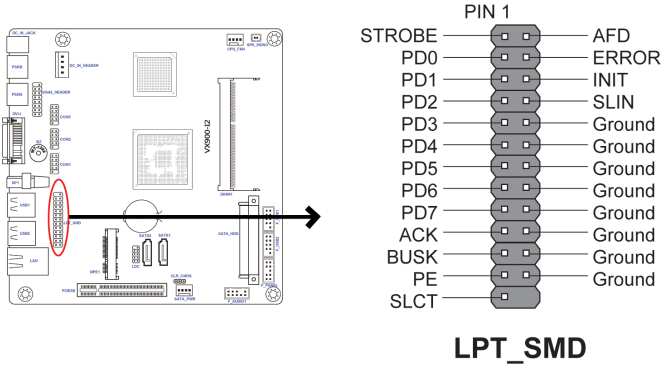
4. SATA1~2: Serial ATA connectors

SATA1/2 connectors support the Serial ATA 3.0Gb/s device. Simpler disk drive cabling and easier PC assembly. It eliminates limitations of the current Parallel ATA interface. But maintains register compatibility and sofeware compatibility with Parallel ATA.



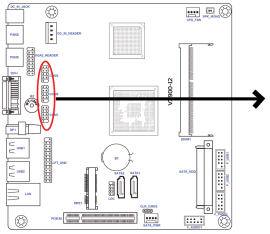
5. LPT_SMD: Onboard parallel port Header

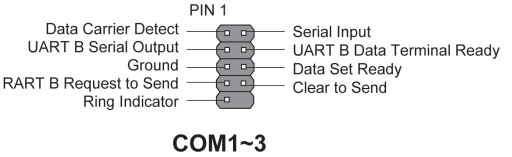
This is a header that can be used to connect to the printer, scanner or other devices.



6. COM1~3: Onboard serial port headers

Connect a serial port extension bracket to this header to add a serial port to your system.

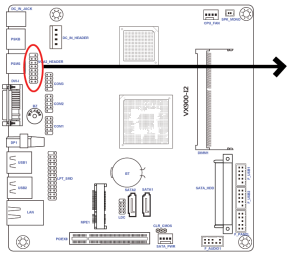


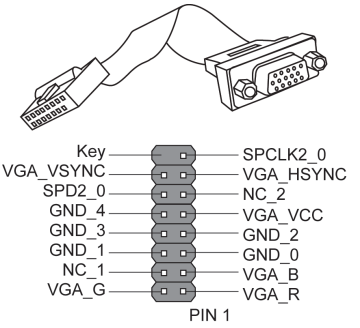


COM1~3

7. VGA2_HEADER: Chassis Intrusion Detect Header

This header is used to connect the display device.





VGA2_HEADER

2-4-4. Installing a SATA Hard Drive

This section describes how to install a SATA Hard Drive.

About SATA Connectors

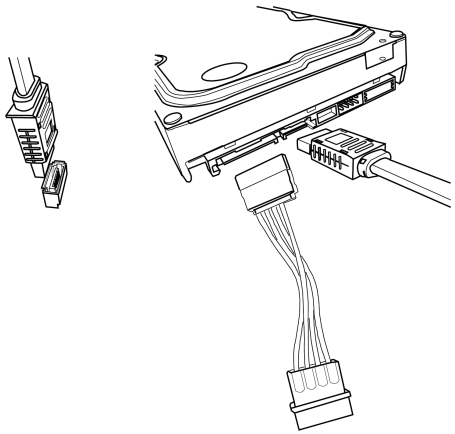
Your motherboard features two SATA connectors supporting a total of two drives. SATA refers to Serial ATA (Advanced Technology Attachment) is the standard interface for the IDE hard drives which are currently used in most PCs. These connectors are well designed and will only fit in one orientation. Locate the SATA connectors on the motherboard and follow the illustration below to install the SATA hard drives.

Installing Serial ATA Hard Drives

To install the Serial ATA (SATA) hard drives, use the SATA cable that supports the Serial ATA protocol. This SATA cable comes with a SATA power cable. You can connect either end of the SATA cable to the SATA hard drive or the connector on the motherboard.

Refer to the illustration below for proper installation:

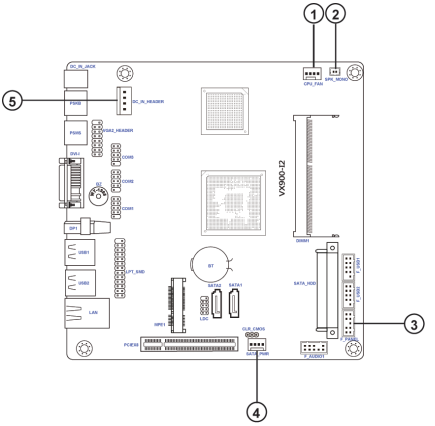
1 Attach either cable end to the connector on the motherboard.
2 Attach the other cable end to the SATA hard drive.
3 Attach the SATA power cable to the SATA hard drive and connect the other end to the power supply.



** For reference only*

2-4-7. Connecting Case Components

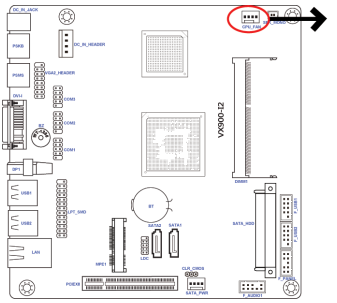
After you have installed the motherboard into a case, you can begin connecting the motherboard components. Refer to the following:

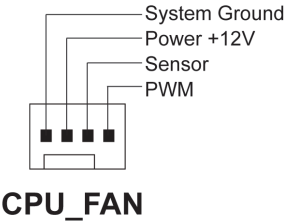


No.	Components
1	CPU_FAN
2	SPK_MONO
3	F_PANEL
4	SATA_PWR
5	DC_IN_HEADER

1. CPU_FAN (CPU cooling FAN Power Connector)

Connect the CPU cooling fan cable to **CPU_FAN**.

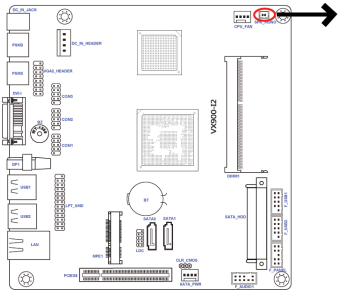


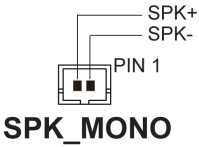


Users please note that the fan connector supports the CPU cooling fan of 1.1A ~ 2.2A (26.4W max) at +12V.

2. SPK_MONO: Mono Speaker

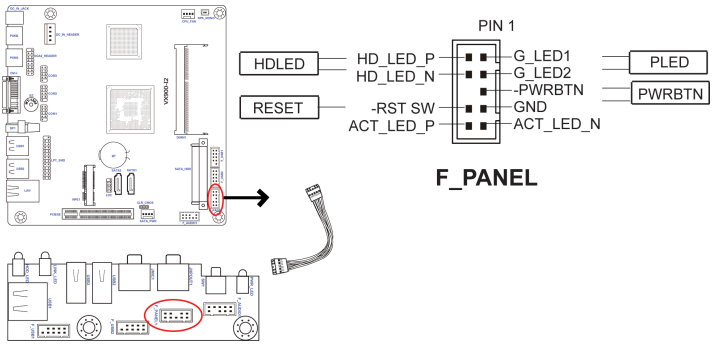
Connect the case speaker cable to **SPK_MONO**.





3. Front Panel Header

The front panel header (F_PANEL) provides a standard set of switch and LED headers commonly found on ATX or Micro ATX cases. Refer to the table below for information:



Hard Drive Activity LED

Connecting pins 2 and 4 to a front panel mounted LED provides visual indication that data is being read from or written to the hard drive. For the LED to function properly, an IDE drive should be connected to the onboard IDE interface. The LED will also show activity for devices connected to the SCSI (hard drive activity LED) connector.

Power/Sleep/Message waiting LED

Connecting pins 1 and 3 to a single or dual-color, front panel mounted LED provides power on/off, sleep, and message waiting indication.

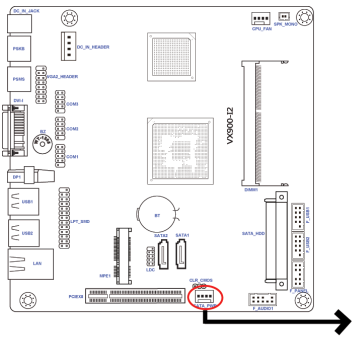
Reset Switch

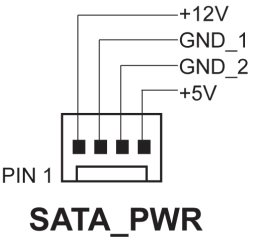
Supporting the reset function requires connecting pin 6 and 8 to a momentary-contact switch that is normally open. When the switch is closed, the board resets and runs POST.

Power Switch

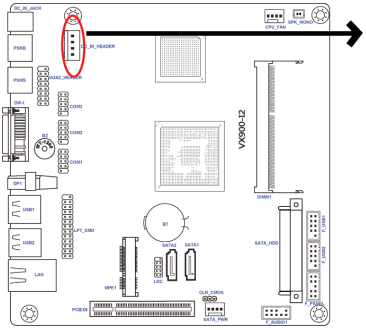
Supporting the power on/off function requires connecting pins 5 and 7 to a momentary-contact switch that is normally open. The switch should maintain contact for at least 50 ms to signal the power supply to switch on or off. The time requirement is due to internal de-bounce circuitry. After receiving a power on/off signal, at least two seconds elapses before the power supply recognizes another on/off signal.

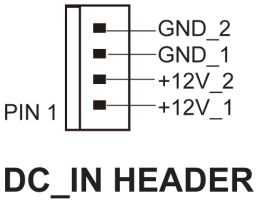
4. SATA_PWR: SATA power connector





5. DC_IN_HEADER: DC IN power connector





This concludes Chapter 2. The next chapter covers the BIOS.

Memo

Chapter 3
Using BIOS

About the Setup Utility

The computer uses the latest "American Megatrends Inc. " BIOS with support for Windows Plug and Play. The CMOS chip on the motherboard contains the ROM setup instructions for configuring the motherboard BIOS.

The BIOS (Basic Input and Output System) Setup Utility displays the system's configuration status and provides you with options to set system parameters. The parameters are stored in battery-backed-up CMOS RAM that saves this information when the power is turned off. When the system is turned back on, the system is configured with the values you stored in CMOS.

The BIOS Setup Utility enables you to configure:

- Hard drives, diskette drives and peripherals
- Video display type and display options
- Password protection from unauthorized use
- Power Management features

The settings made in the Setup Utility affect how the computer performs. Before using the Setup Utility, ensure that you understand the Setup Utility options.

This chapter provides explanations for Setup Utility options.

The Standard Configuration

A standard configuration has already been set in the Setup Utility. However, we recommend that you read this chapter in case you need to make any changes in the future.

This Setup Utility should be used:

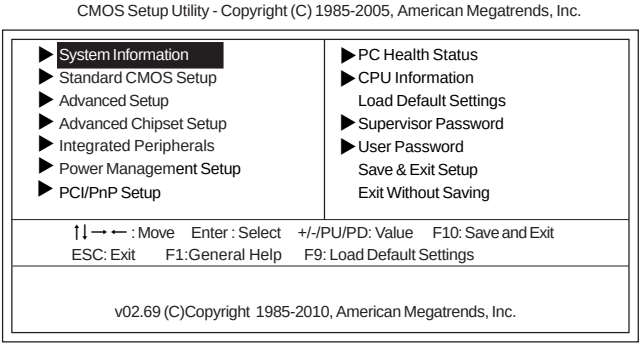
- when changing the system configuration
- when a configuration error is detected and you are prompted to make changes to the Setup Utility
- when trying to resolve IRQ conflicts
- when making changes to the Power Management configuration
- when changing the password or making other changes to the Security Setup

Entering the Setup Utility

When you power on the system, BIOS enters the Power-On Self Test (POST) routines. POST is a series of built-in diagnostics performed by the BIOS. After the POST routines are completed, the following message appears:

Press DEL to enter SETUP

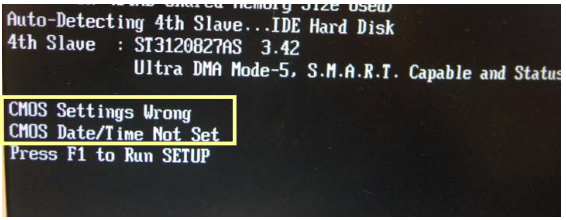
Press the delete key to access BIOS Setup Utility.

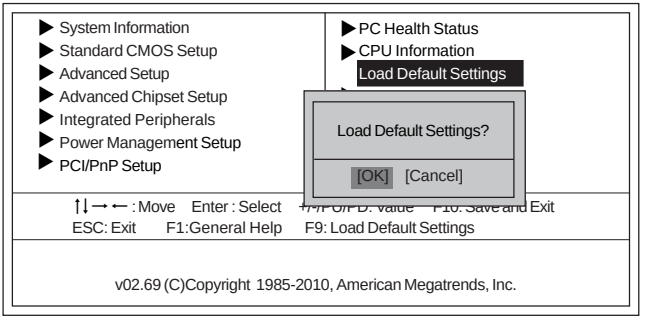


Resetting the Default CMOS Values

When powering on for the first time, the POST screen may show a "CMOS Settings Wrong" message. This standard message will appear following a clear CMOS data at factory by the manufacturer. You simply need to Load Default Settings to reset the default CMOS values.

Note: Changes to system hardware such as different CPU, memories, etc. may also trigger this message.





Using BIOS

When you start the Setup Utility, the main menu appears. The main menu of the Setup Utility displays a list of the options that are available. A highlight indicates which option is currently selected. Use the cursor arrow keys to move the highlight to other options. When an option is highlighted, execute the option by pressing <Enter>.

Some options lead to pop-up dialog boxes that prompt you to verify that you wish to execute that option. Other options lead to dialog boxes that prompt you for information.

Some options (marked with a triangle▶) lead to submenus that enable you to change the values for the option. Use the cursor arrow keys to scroll through the items in the submenu.

In this manual, default values are enclosed in parenthesis. Submenu items are denoted by a triangel▶.

The default BIOS setting for this motherboard apply for most conditions with optimum performance. We do not suggest users change the default values in the BIOS setup and take no responsibility to any damage caused by changing the BIOS settings.

BIOS Navigation Keys

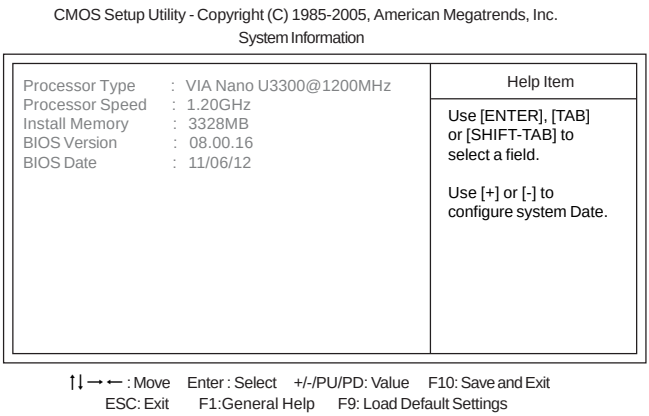
The BIOS navigation keys are listed below:

KEY	FUNCTION
ESC	Exits the current menu
↑↓→←	Scrolls through the items on a menu
+/- /PU/PD	Modifies the selected field's values
Enter	Select
F9	Loads an optimized setting for better performance
F10	Saves the current configuration and exits setup
F1	Displays a screen that describes all key functions

For the purpose of better product maintenance, the manufacture reserves the right to change the BIOS items presented in this manual. The BIOS setup screens shown in this chapter are for reference only and may differ from the actual BIOS. Please visit the manufacture's website for updated manual.

System Information

This option shows basic information about your system.



Processor Type

This item shows the information of current manufacturer of the CPU installed in your computer.

Processor Speed

This item shows the Frequency of your CPU.

Install Memory

This item shows the total amount of memory installed on the system.

BIOS Version

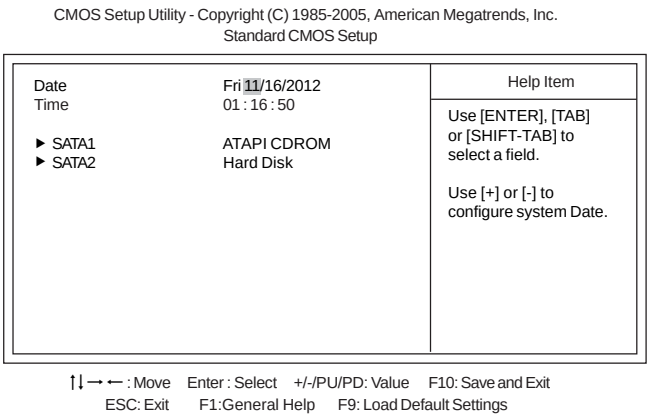
This item shows the information of the BIOS version.

BIOS Date

This item shows the created date of the BIOS.

Standard CMOS Setup

This option enables you to configure the system time and date, SATA devices, etc.



Date & Time

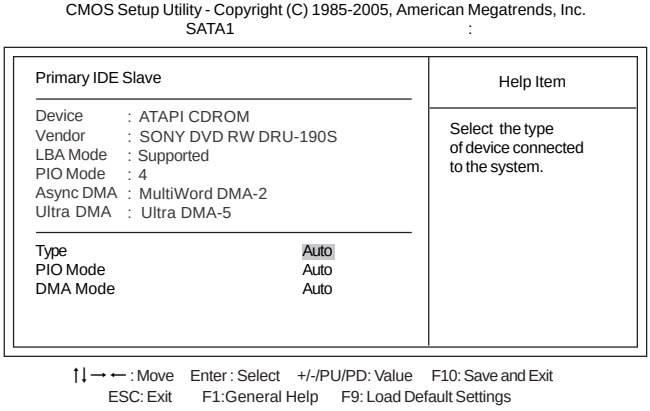
The Date and Time items show the current date and time on the computer. If you are running a Windows OS, these items are automatically updated whenever you make changes to the Windows Date and Time Properties utility.

▶ SATA1~2

This motherboard supports two SATA channels and each channel allows one SATA device to be installed. Use these items to configure each device on the SATA channel.

▶SATA1

Scroll to this item and press <Enter> to view the following screen:



▶SATA2

Scroll to this item and press <Enter> to view the following screen:

CMOS Setup Utility - Copyright (C) 1985-2005, American Megatrends, Inc.
SATA2 :

Primary IDE Master		Help Item
Device	: Hard Disk	Select the type of device connected to the system.
Vendor	: HDS728080PLA380	
Size	: 82.3GV	
LBA Mode	: Supported	
Block Mode	: 16Sectors	
PIO Mode	: 4	
Async DMA	: MultiWord DMA-2	
Ultra DMA	: Ultra DMA-6	
S.M.A.R.T.	: Supported	
Type	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	

↑↓→←: Move Enter : Select +/-/PU/PD: Value F10: Save and Exit
ESC: Exit F1:General Help F9: Load Default Settings

Type (Auto)

Use this item to configure the type of the IDE device that you specify. If the feature is enabled, it will enhance hard disk performance by reading or writing more data during each transfer.

LBA/Large Mode (Auto)

Use this item to set the LAB/Large mode to enhance hard disk performance by optimizing the area the hard disk is visited each time.

Block (Multi-Sector Transfer) (Auto)

If the feature is enabled, it will enhance hard disk performance by reading or writing more data during each transfer.

PIO Mode (Auto)

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

DMA Mode (Auto)

DMA capability allows user to improve the transfer-speed and data-integrity for compatible IDE devices.

S.M.A.R.T. (Auto)

The S.M.A.R.T. (Self-Monitoring, Analysis and Reporting Technology) system is a diagnostics technology that monitors and predicts device performance. S.M.A.R.T. software resides on both the disk drive and the host computer.

32Bit Data Transfer (Enabled)

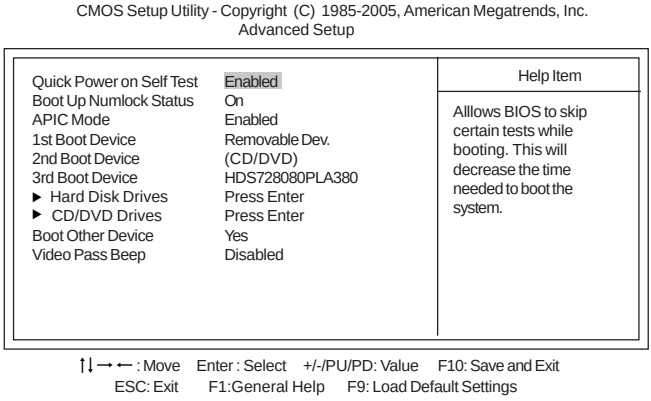
Use this item to set the onboard SATA-IDE channel to be disabled, IDE, or RAID.

Press <Esc> to return to the Standard CMOS Setup page.

Press <Esc> to return to the main menu setting page.

Advanced Setup

This page sets up more advanced information about your system. Handle this page with caution. Any changes can affect the operation of your computer.



Quick Power on Self Test (Enabled)

Enable this item to shorten the power on testing (POST) and have your system start up faster. You might like to enable this item after you are confident that your system hardware is operating smoothly.

Boot Up Numlock Status (On)

This item defines if the keyboard Num Lock key is active when your system is started.

APIC Mode (Enabled)

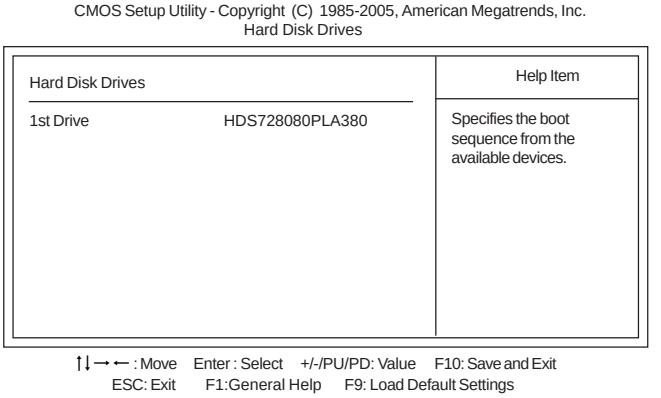
This item allows you to enable or disable the APIC (Advanced Programmable Interrupt Controller) mode. APIC provides symmetric multi-processing (SMP) for systems, allowing support for up to 60 processors.

1st/2nd/3rd Boot Device (Removable Dev./(CD/DVD)/HDS728080PLA380)

Use these items to determine the device order the computer used to look for an operating system to load at start-up time. The devices showed here will be different depending on the exact devices installed on your motherboard.

► **Hard Disk Drives**

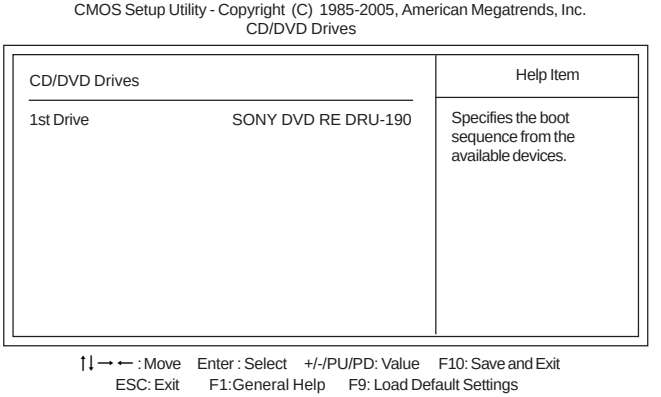
Scroll to this item and press <Enter> to view the following screen:



Press <Esc> to return to the Advanced Setup page.

► **CD/DVD Drives**

Scroll to this item and press <Enter> to view the following screen:



Press <Esc> to return to the Advanced Setup page.

Boot Other Device (Yes)

When enabled, the system searches all other possible locations for an operating system if it fails to find one in the devices specified under the First, Second and Third boot devices.

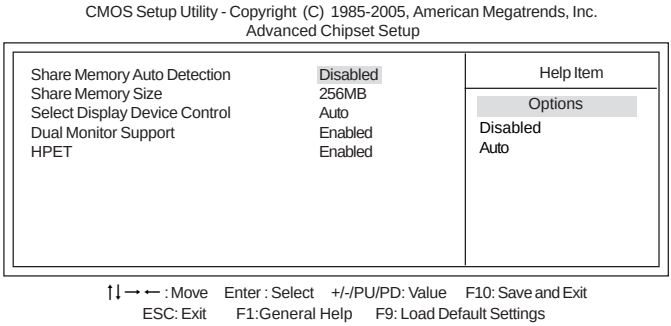
Video Pass Beep (Disabled)

This item allows you to enable or disable video pass beep sound.

Press <Esc> to return to the main menu setting page.

Advanced Chipset Setup

This page sets up more advanced information about your system. Handle this page with caution. Any changes can affect the operation of your computer.



Share Memory Auto Detection (Disabled)

Disable this item to set the Share Memory Size. And if the item is set to Auto, Share Memory Size can be controlled according to the dram size. When the dram size is less than 512 MB, Share Memory Size should be set to 64 MB. While between 512 MB and 1 GB, it should be set to 128 MB. When more than 1 GB, it should be set to 256 MB.

Share Memory Size (256MB)

This item displays the VGA Share Memory Value.

Select Display Device Control (Auto)

This item enables you to select the display device. When set Auto as the default setting, the system will automatically select the display device.

Dual Monitor Support (Enabled)

This item enables or disables dual monitor support function.

HPET (Enabled)

This item enables or disables HPET (High Precision Event Timer) support.

Press <Esc> to return to the main menu setting page.

Integrated Peripherals

This page sets up some parameters for peripheral devices connected to the system.

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Integrated Peripherals

SATA Configuration	IDE	Help Item
ON Chip SATA 6Gb/s Controller	IDE	
Onboard AUDIO Function	Enabled	Options
Onboard LAN Function	Enabled	IDE
Onboard LAN Boot ROM	Disabled	RAID
Serial Port1 Address	3F8/ IRQ4	
Serial Port2 Address	2F8/ IRQ3	
Serial Port3 Address	Enabled	
Parallel Port Address	378	
Parallel Port Mode	ECP	
ECP Mode DMA Channel	DMA3	
Parallel Port IRQ	IRQ7	
USB Functions	Enabled	
Legacy USB Support	Enabled	

↑↓→←: Move Enter : Select +/-/PU/PD: Value F10: Save and Exit
ESC: Exit F1:General Help F9: Load Default Settings

SATA Configuration (IDE)

Use this item to show the Serial ATA Configuration options: IDE, RAID.

ON Chip SATA 6Gb/s Controlle (IDE)

This item allows you to enable or disable onchip SATA 6Gb/s controller.

Onboard AUDIO Function (Enabled)

Use this item to enable or disable the onboard audio device.

Onboard LAN Function (Enabled)

Use this item to enable or disable the onboard LAN function.

Onboard LAN Boot ROM (Disabled)

Use this item to enable or disable the booting from the onboard LAN.

Serial Port1/Port2/Port3 Address (3F8/IRQ4 / 2F8/IRQ3 / Enabled)

Use this item to enable or disable the onboard COM1/COM2/COM3 serial port, and to assign a port address.

Parallel Port Address (378)

Use this item to enable or disable the onboard Parallel port, and to assign a port address.

Parallel Port Mode (ECP)

Use this item to select the parallel port mode. You can select Normal (Standard Parallel Port), ECP (Extended Capabilities Port), or EPP (Enhanced Parallel Port).

Parallel Port IRQ (IRQ7)

Use this item to assign IRQ to the parallel port.

ECP Mode DMA Channel (DMA3)

Use this item to assign a DMA channel to the parallel port.

USB Functions (Enabled)

Use this item to enable or disable the USB function.

Legacy USB Support (Enabled)

Use this item to enable or disable support for legacy USB devices.

Press <Esc> to return to the main menu setting page.

Power Management Setup

This page sets up some parameters for system power management operation.

CMOS Setup Utility - Copyright (C) 1985-2005, American Megatrends, Inc.
Power Management Setup

		Help Item
ACPI Suspend Type	Auto	Select the ACPI state used for System Suspend.
PWRON After PWR-Fail	Power Off	
Resume By RING	Disabled	
Resume By PCI/PCI-E/Lan PME	Enabled	
Resume By USB (S3)	Disabled	
Resume By PS2 KB (S3)	Disabled	
Resume By PS2 MS (S3)	Disabled	
Resume On RTC Alarm	Disabled	
EUP Support	Enabled	

↑↓→←: Move Enter: Select +/-/PU/PD: Value F10: Save and Exit
ESC: Exit F1:General Help F9: Load Default Settings

ACPI Suspend Type (Auto)

Use this item to define how your system suspends. When set this item to Auto, the system will automatically select the suspend mode(S1 or S3).

PWRON After PWR-Fail (Power Off)

This item defines how the system will act after AC power loss during system operation. When you set to off, it will keep the system in Off state until the power button is pressed.

Resume By RING (Disabled)

An input signal on the serial Ring Indicator (RI) line (in other words, an incoming call on the modem) awakens the system from a soft off state.

Resume By PCI/PCI-E/Lan PME (Enabled)

These items specify whether the system will be awakened from power saving modes when activity or input signal of the specified hardware peripheral or component is detected.

Resume By USB (S3) (Disabled)

This item allows you to enable/disable the USB device wakeup function from S3 mode.

Resume By PS2 KB (S3) (Disabled)

This item enables or disables you to allow keyboard activity to awaken the system from power saving mode.

Resume By PS2 MS (S3) (Disabled)

This item enables or disables you to allow mouse activity to awaken the system from power saving mode.

Resume On RTC Alarm (Disabled)

The system can be turned off with a software command. If you enable this item, the system can automatically resume at a fixed time based on the system's RTC (realtime clock). Use the items below this one to set the date and time of the wake-up alarm. You must use an ATX power supply in order to use this feature.

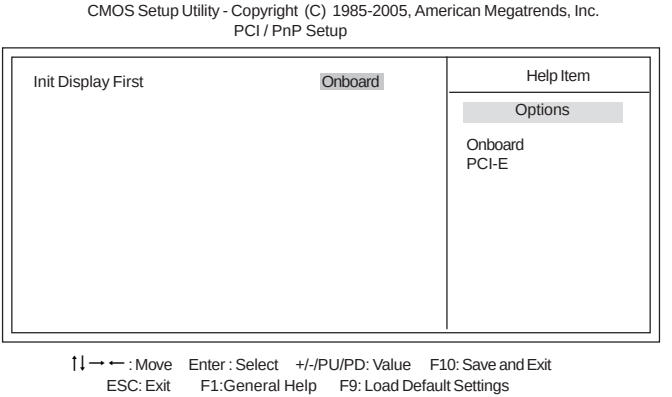
EUP Function (Enabled)

This item allows user to enable or disable EUP support.

Press <Esc> to return to the main menu setting page.

PCI / Plug and Play Setup

This page sets up some parameters for devices installed on the PCI bus and those utilizing the system plug and play capability.



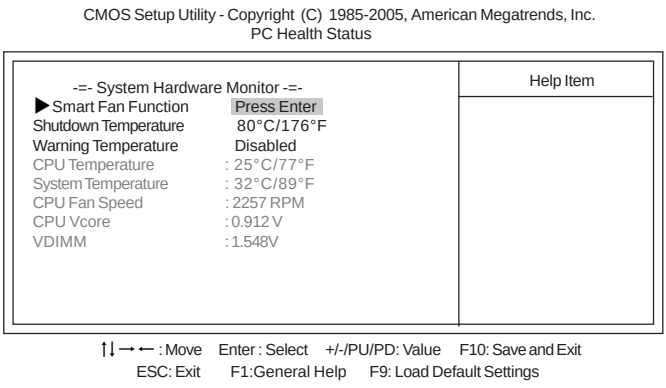
Init Display First (Onboard)

This item allows you to choose the primary display card.

Press <Esc> to return to the main menu setting page.

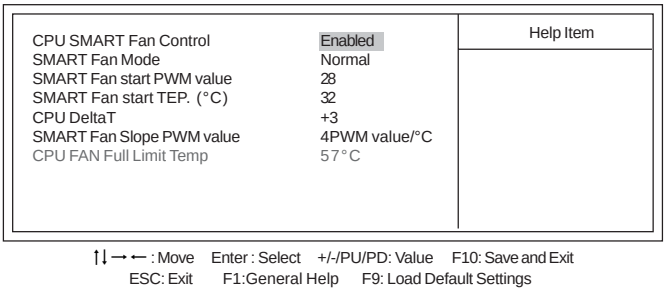
PC Health Status

On motherboards support hardware monitoring, this item lets you monitor the parameters for critical voltages, temperatures and fan speeds.



▶Smart Fan Function

Scroll to this item and press <Enter> to view the following screen:



CPU SMART FAN Control (Enabled)

This item allows you to enable or disable the control of the CPU fan speed by changing the fan voltage.

SMART Fan Mode (Normal)

This item allows you to select the fan mode (Normal, Quiet, Silent, or Manual) for a better operation environment. If you choose Normal mode, the fan speed will be auto adjusted depending on the CPU temperature. If you choose Quite mode, the fan speed will be auto minimized for quiet environment. If you choose Silent mode, the fan speed will be auto restricted to make system more quietly. If you choose Manual mode, the fan speed will be adjust depending on users' parameters.

SMART Fan start PWM value (28)

This item is used to set the start PWM value of the smart fan.

SMART Fan start TEMP. (°C) (32)

This item is used to set the start temperature of the smart fan.

CPU DeltaT (+3)

This item specifies the range that controls CPU temperature and keeps it from going so high or so low when smart fan works.

SMART Fan Slope PWM value (4 PWM value/°C)

This item is used to set the Slope Select PWM of the smart fan.

CPU FAN Full Limit Temp (57°C)

This item shows the limit temperature when the smart fan starts to run at full speed.

Press <Esc> to return to the PC Health Status page.

Shutdown Temperature (Disabled)

Enable you to set the maximum temperature the system can reach before powering down.

Warning Temperature (Disabled)

This item enables or disables the warning temperature.

System Component Characteristics

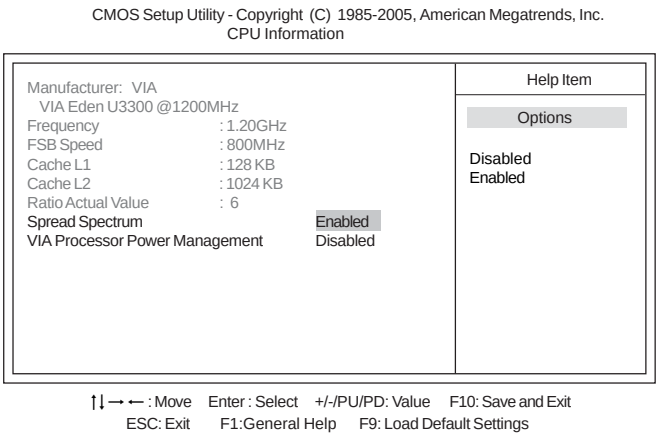
These items display the monitoring of the overall inboard hardware health events, such as System & CPU temperature, CPU & DIMM voltage...etc.

- CPU Temperature
- System Temperature
- CPU Fan Speed
- CPU Vcore
- VDIMM

Press <Esc> to return to the main menu setting page.

CPU Information

This page enables you to monitor or set some information of the processor you have installed in your system.



Manufacturer (VIA)

This item displays the information of current manufacturer of the CPU installed in your computer.

Frequency (1.20GHz)

This item shows the Frequency of your CPU.

FSB Speed (800MHz)

This item shows the FSB Speed of your CPU.

Cache L1/L2 (128KB/1024KB)

These items show the actual CPU interal level 1/2 cache size.

Ratio Actual Value (6)

This item shows the actual ratio of the CPU installed in your system.

Spread Spectrum (Enabled)

If you enable spread spectrum, it can significantly reduce the EMI (Electro-Magnetic Interference) generated by the system.

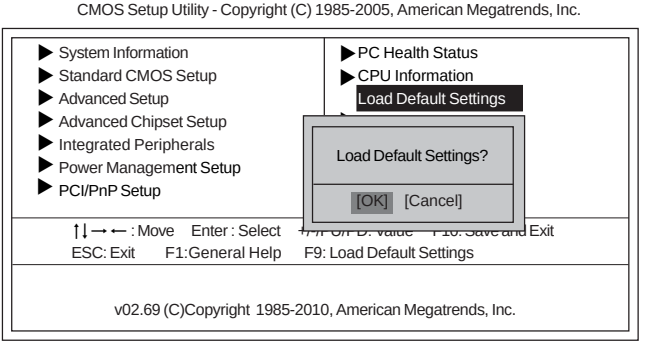
VIA Processor Power Management (Enabled)

This item allows you to enable or disable VIA processor power management.

Press <Esc> to return to the main menu setting page.

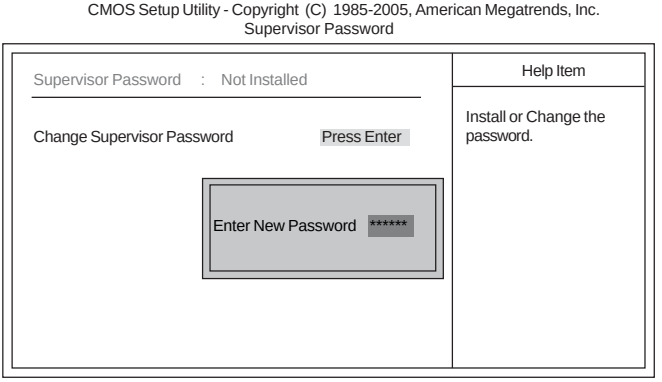
Load Default Settings

This option opens a dialog box that lets you install stability-oriented defaults for all appropriate items in the Setup Utility. Select <OK> and then press <Enter> to install the defaults. Select <Cancel> and then press <Enter> to not install the defaults.



Supervisor Password

This page helps you install or change a password.



Supervisor Password (Not Installed)

This item indicates whether a supervisor password has been set. If the password has been installed, *Installed* displays. If not, *Not Installed* displays.

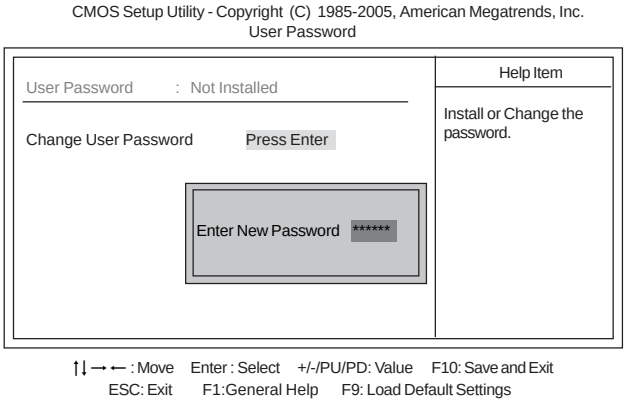
Change Supervisor Password (Press Enter)

You can select this option and press <Enter> to access the sub menu. You can use the sub menu to change the supervisor password.

Press <Esc> to return to the main menu setting page.

User Password

This page helps you install or change a password.



User Password (Not Installed)

This item indicates whether a user password has been set. If the password has been installed, *Installed* displays. If not, *Not Installed* displays.

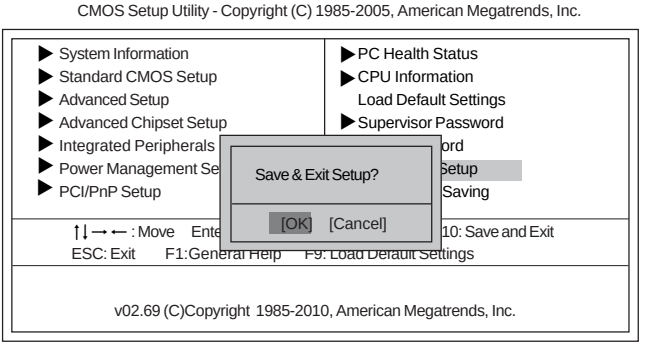
Change User Password (Press Enter)

You can select this option and press <Enter> to access the sub menu. You can use the sub menu to change the user password.

Press <Esc> to return to the main menu setting page.

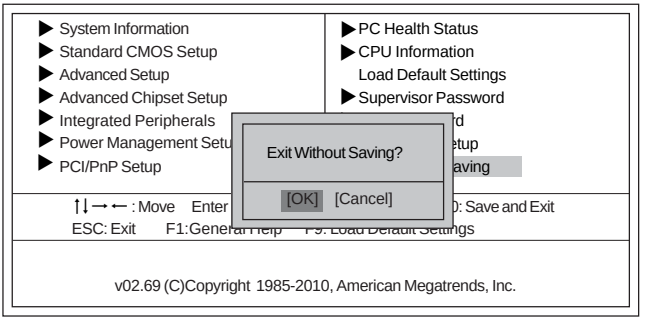
Save & Exit Setup

Highlight this item and press <Enter> to save the changes that you have made in the Setup Utility and exit the Setup Utility. When the Save and Exit dialog box appears, select [OK] to save and exit, or select [Cancel] to return to the main menu.



Exit Without Saving

Highlight this item and press <Enter> to discard any changes that you have made in the Setup Utility and exit the Setup Utility. When the Exit Without Saving dialog box appears, select [OK] to discard changes and exit, or select [Cancel] to return to the main menu.



*If you have made settings that you do not want to save, use the "*Exit Without Saving*" item and select [OK] to discard any changes you have made.*

Updating the BIOS

You can download and install updated BIOS for this motherboard from the manufacturer's Web site. New BIOS provides support for new peripherals, improvements in performance, or fixes for known bugs. Install new BIOS as follows:

1 If your motherboard has an item called BIOS Protect in Advanced BIOS features, disable it. (BIOS Protect prevents BIOS from being overwritte.)

2 Prepare a bootable device or create a bootable system disk. (Refer to Windows online help for information on creating a bootable system disk.)

3 Download the Flash Utility and new BIOS file from the manufacturer's Web site. Copy these files to the bootable device.

4 Turn off your computer and insert the bootable device in your computer. (You might need to run the Setup Utility and change the boot priority items on the Advanced BIOS Features Setup page, to force your computer to boot from the bootable device first)

5 At the C:\ or A:\ prompt, type the Flash Utility program name and the file name of the new BIOS and then press <Enter>. Example: AFUDOS.EXE 040706.ROM

6 When the installation is complete, remove the bootable device from the computer and restart your computer. If your motherboard has a Flash BIOS jumper, reset the jumper to protect the newly installed BIOS from being overwritten. The computer will restart automatically.

This concludes Chapter 3.

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Chapter 4
Trouble Shooting

Start up problems during assembly

After assembling the PC for the first time you may experience some start up problems. Before calling for technical support or returning for warranty, this chapter may help to address some of the common questions using some basic troubleshooting tips. You may also log onto our ECS website for more information: *http:// www.ecs.com.tw/ECSWebSite/Support/Support_FAQ.aspx?MenuID=49&childid=M_49&LanID=0*

a) System does not power up and the fans are not running.

1. Disassemble the PC to remove the VGA adaptor card, DDR memory, LAN, USB and other peripherals including keyboard and mouse. Leave only the motherboard, CPU with CPU cooler and power supply connected. Make sure the power cord is plugged into the wall socket & the switch on the Power Supply Unit (PSU) is turned " on " as well. Turn on again to see if the CPU and power supply fans are running.

2. Make sure to remove any unused screws or other metal objects such as screwdrivers from the inside PC case. This is to prevent damage from short circuit.

3. Check the CPU FAN connector is connected to the motherboard.

4. Check the 12V power connector is connected to the motherboard.

5. Check that the 12V power & ATX connectors are fully inserted into the motherboard connectors. Make sure the latches of the cable and connector are locked into place.

b) Power is on, fans are running but there is no display

1. Make sure the monitor is turned on and the monitor cable is properly connected to the PC.

2. Check the VGA adapter card (if applicable) is inserted properly.

3. Listen for beep sounds. If you are using internal PC speaker make sure it is connected.
   a. continuous 3 short beeps: memory not detected
   b. 1 long beep and 8 short beeps: VGA not detected

c) The PC suddenly shuts down while booting up.

1. The CPU may experience overheating so it will shutdown to protect itself. Apply the thermal grease onto the CPU heatsink & ensure the CPU fan is well-connected with the CPU heatsink. Check if the CPU fan is working properly while the system is running.

2. From the BIOS setting, try to disable the Smartfan function to let the fan run at default speed. Doing a Load Optimised Default will also disable the Smartfan.

Start up problems after prolong use

After a prolong period of use your PC may experience start up problems again. This may be caused by breakdown of devices connected to the motherboard such as HDD, CPU fan, etc. The following tips may help to revive the PC or identify the cause of failure.

1. Clear the CMOS values using the CLR_CMOS jumper. Refer to CLR_CMOS jumper in Chapter 2 for Checking Jumper Settings in this user manual. When completed, follow up with a Load Optimised Default in the BIOS setup.

2. Check the CPU cooler fan for dust. Long term accumulation of dust will reduce its effectiveness to cool the processor. Clean the cooler or replace a new one if necessary.

3. Check that the 12V power & ATX connectors are fully inserted into the motherboard connectors. Make sure the latches of the cable and connector are locked into place.

4. Remove the hard drive, optical drive or DDR memory to determine which of these components may be at fault.

5. Check whether there is any bulked up electrolytic capacitor or abnormal component.

Please logo onto our ECS website: http://www.ecs.com.tw/ECSWebSite/Support/Technical_Support_List.aspx?MenuID=50&LanID=0 for more information.

Maintenance and care tips

Your computer, like any electrical appliance, requires proper care and maintenance. Here are some basic PC care tips to help prolong the life of the motherboard and keep it running as best as it can.

1. Keep your computer in a well ventilated area. Leave some space between the PC and the wall for sufficient airflow.

2. Keep your computer in a cool dry place. Avoid dusty areas, direct sunlight and areas of high moisture content.

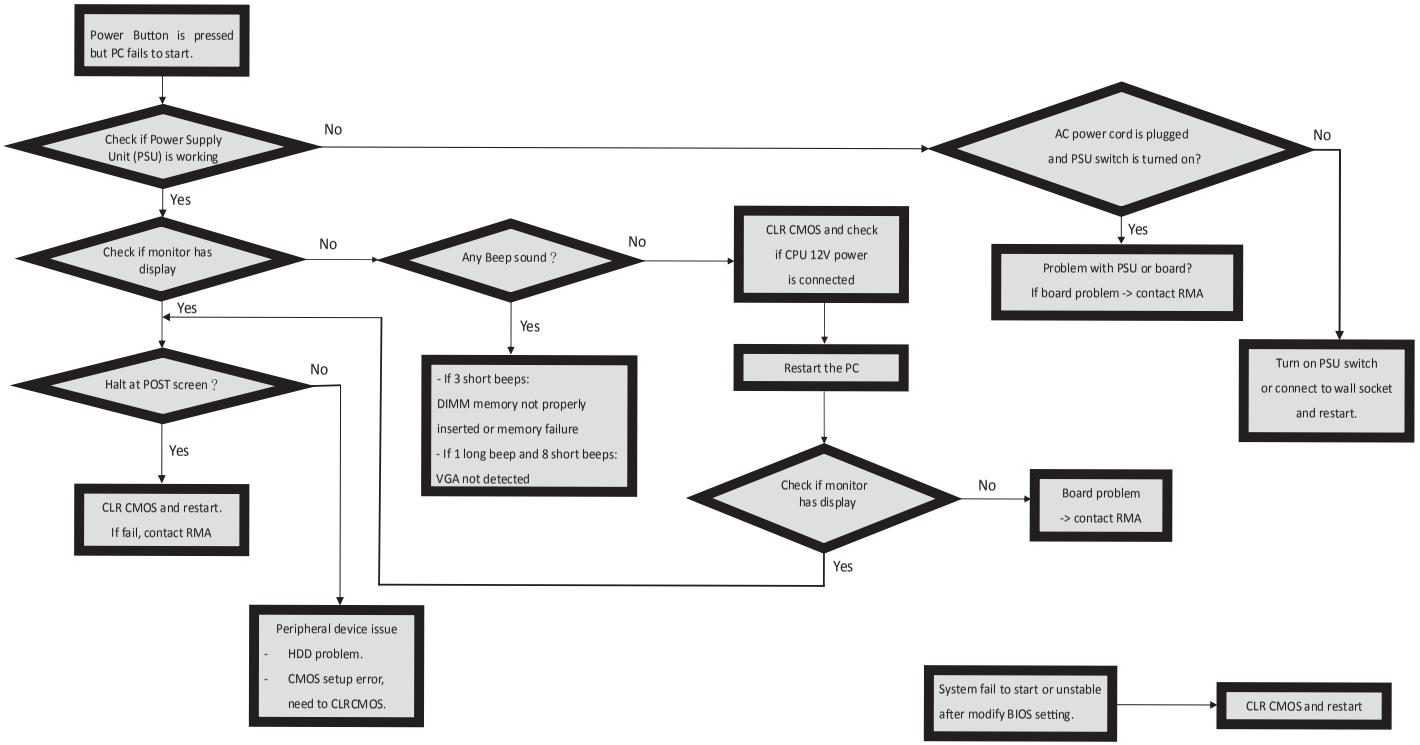
3. Routinely clean the CPU cooler fan to remove dust and hair.

4. In places of hot and humid weather you should turn on your computer once every other week to circulate the air and prevent damage from humidity.

5. Add more memory to your computer if possible. This not only speeds up the system but also reduces the loading of your hard drive to prolong its life span.

6. If possible, ensure the power cord has an earth ground pin directly from the wall outlet. This will reduce voltage fluctuation that may damage sensitive devices.

Basic Troubleshooting Flowchart



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