

***USER'S MANUAL***  
***Of***  
***Intel Q67 Express Chipset***  
***Based***  
***M/B for LGA 1155 Quad Core Ready***  
***Intel Core Processor***

*No. G03-NAF92-F*

*Rev: 2.0*

*Release date: March 15, 2012*

**Trademark:**

\* Specifications and Information contained in this documentation are furnished for information use only, and are subject to change at any time without notice, and should not be construed as a commitment by manufacturer.

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## Environmental Safety Instruction

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- Avoid the dusty, humidity and temperature extremes. Do not place the product in any area where it may become wet.
- 0 to 40 centigrade is the suitable temperature. (The figure comes from the request of the main chipset)
- Generally speaking, dramatic changes in temperature may lead to contact malfunction and crackles due to constant thermal expansion and contraction from the 'welding spots' that connect components and PCB. Computer should go through an adaptive phase before it boots when it is moved from a cold environment to a warmer one to avoid condensation phenomenon. These water drops attached on PCB or the surface of the components can bring about phenomena as minor as computer instability resulted from corrosion and oxidation from components and PCB or as major as short circuit that can burn the components. Suggest starting the computer until the temperature goes up.
- The increasing temperature of the capacitor may decrease the life of computer. Using the close case may decrease the life of other device because the higher temperature in the inner of the case.
- Attention to the heat sink when you over-clocking. The higher temperature may decrease the life of the device and burned the capacitor.

## Environmental Protection Announcement

Do not dispose this electronic device into the trash while discarding. To minimize pollution and ensure environment protection of mother earth, please recycle.



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## Manual Revision Information

Reversion	Revision History	Date
2.0	Second Edition	March 15, 2012

## Item Checklist

- Motherboard
- User's Manual
- DVD for motherboard utilities
- Cable(s)
- I/O Back panel shield

# Chapter 1

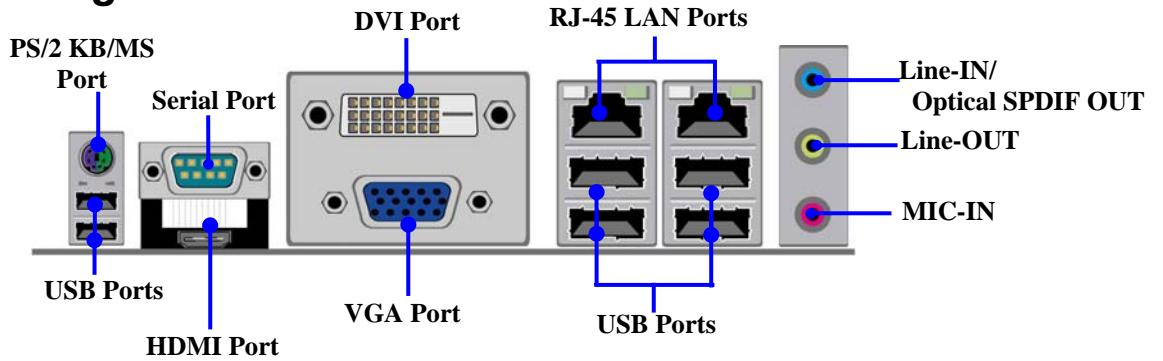
## Introduction of the Motherboard

### 1-1 Specification

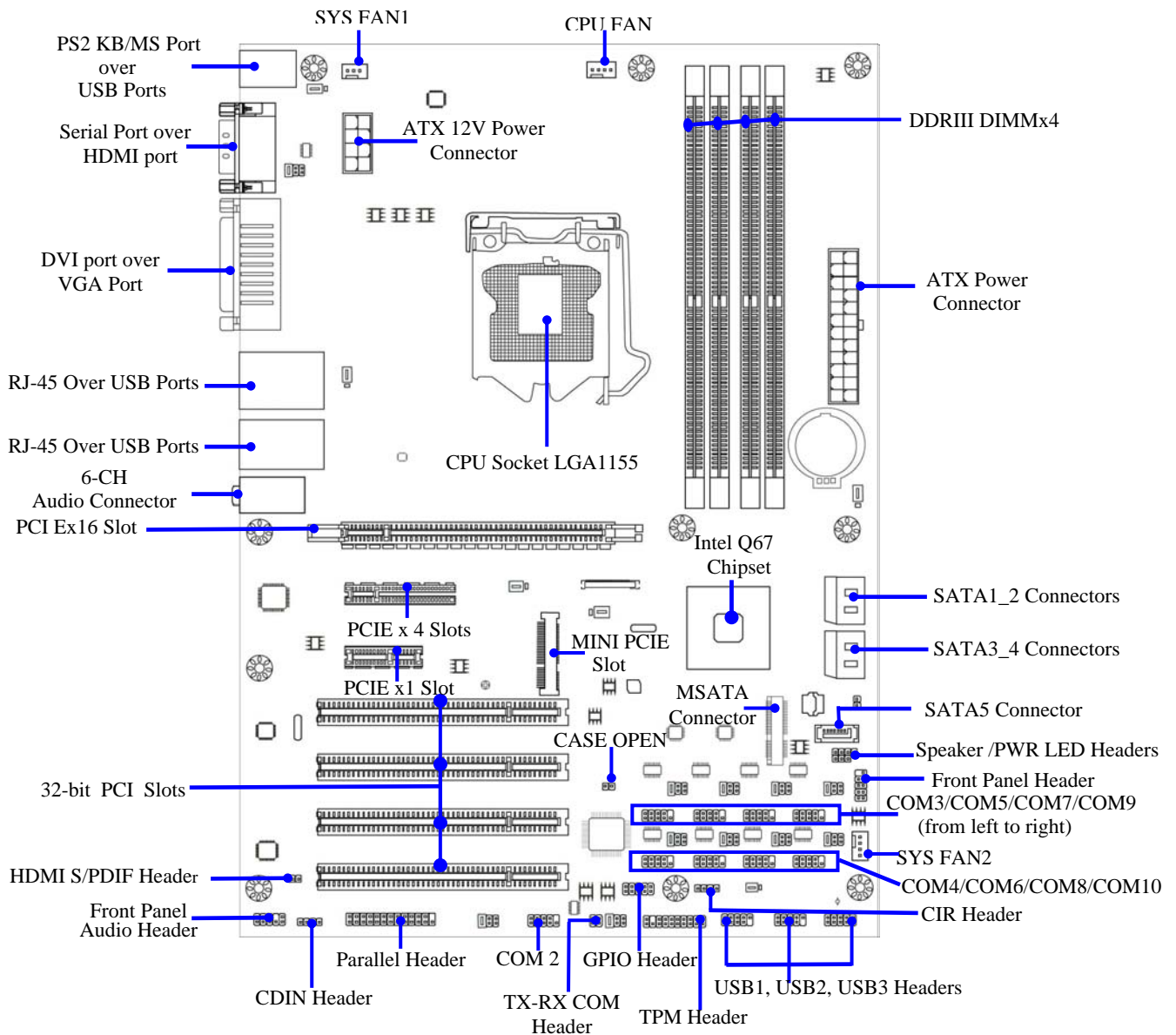
Spec	Description
<b>Design</b>	<ul style="list-style-type: none"> <li>● ATX form factor 4 layers;</li> </ul>
<b>Chipset</b>	<ul style="list-style-type: none"> <li>● Intel Q67 Express Chipset</li> </ul>
<b>CPU Socket (LGA1155)</b>	<ul style="list-style-type: none"> <li>● Intel® LGA1155 Socket</li> <li>* For detailed CPU support information please visit our website</li> </ul>
<b>Memory Slot</b>	<ul style="list-style-type: none"> <li>● DDRIII RAM module socket x 4 supporting four DDRIII 1333/1066MHz RAM Module expandable to 32 GB (Maximum)</li> <li>● Support dual-channel function</li> </ul>
<b>Expansion Slots</b>	<ul style="list-style-type: none"> <li>● 4 pcs *32-bit PCI slot</li> <li>● 1 pcs* PCI-Express 2.0 x16 slot</li> <li>● 1 pcs* PCI-Express 2.0 x4 slot</li> <li>● 1 pcs* PCI-Express 2.0 x1 slot</li> <li>● 1 pcs*Mini-PCI-E x 1</li> </ul>
<b>Storage</b>	<ul style="list-style-type: none"> <li>● Support four serial ATA2 ports</li> <li>● Support two serial ATA3 ports</li> </ul>
<b>Dual LAN Chip</b>	<ul style="list-style-type: none"> <li>● Integrated Intel 82574L and 82579LM Gigabit Ethernet LAN chip that supports Fast Ethernet LAN function of providing 10Mb/100Mb/1000Mb Ethernet data transfer rate</li> </ul>
<b>HD Audio Chip</b>	<ul style="list-style-type: none"> <li>● VIA VT 1705CE 6-channel HD Audio Codec integrated</li> <li>● Audio driver and utility included</li> </ul>
<b>BIOS</b>	<ul style="list-style-type: none"> <li>● 64MB SMT Flash ROM</li> </ul>
<b>Multi I/O</b>	<ul style="list-style-type: none"> <li>● PS/2 keyboard x1</li> <li>● DVI Connector x1</li> <li>● D-Sub 15-pin VGA Connector x1</li> <li>● USB 2.0 connector x 6</li> <li>● USB 2.0 headers x3</li> <li>● RJ-45 LAN connector x2</li> <li>● Serial port connector x1</li> <li>● Audio connector x1</li> <li>● Front panel header x1</li> <li>● POWER LED header x1</li> <li>● Speaker header x1</li> <li>● Front panel audio header x1</li> <li>● CDIN header x1</li> <li>● GPIO header x1</li> <li>● TPM 1.2 header x1</li> <li>● CIR header x1</li> <li>● HDMI-SPDIF header x1</li> <li>● Parallel header x1</li> <li>● TX-RX COM1 header x 1</li> <li>● COM port header x 9</li> </ul>

# 1-2 Layout Diagram

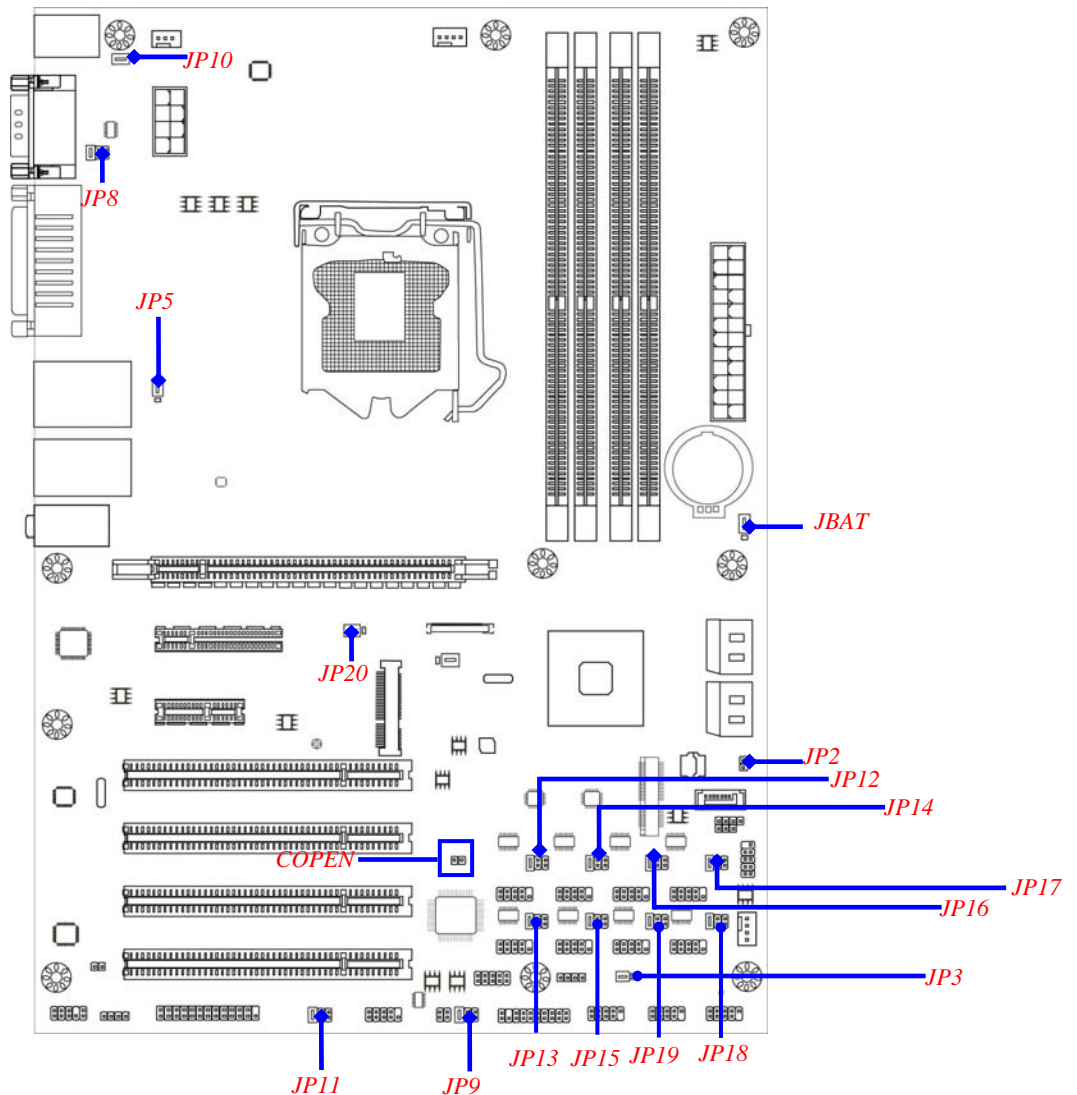
## Rear IO Diagram



## Motherboard Internal Diagram



## Motherboard Jumper Position



### Jumper

Jumper	Name	Description
JBAT	CMOS RAM Clear Function Setting	3-pin Block
JP3	USB Header Power On Function Setting	3-pin Block
JP5	USB Port Power On Function Setting	3-pin Block
JP8	COM1 Port Pin9 Function Selecting	6-pin Block
JP9	COM2 RS232/485/422 Function Selecting	6-pin Block
JP10	KB/MS/USB Power-On Function Setting	3-pin Block
JP11	COM2 Header Pin9 Function Selecting	6-pin Block
JP12	COM3 Header Pin9 Function Selecting	6-pin Block
JP13	COM4 Header Pin9 Function Selecting	6-pin Block
JP14	COM5 Header Pin9 Function Selecting	6-pin Block
JP15	COM6 Header Pin9 Function Selecting	6-pin Block
JP16	COM7 Header Pin9 Function Selecting	6-pin Block
JP17	COM9 Header Pin9 Function Selecting	6-pin Block

JP18	COM10 Header Pin9 Function Selecting	6-pin Block
JP19	COM8 Header Pin9 Function Selecting	6-pin Block
JP20	Mini PCI-E Power VCC3.3V/3.3V SB	3-pin Block
Case_open	Case Open Message Display Function Selecting	2pin Block

## Connectors

Connector	Name	Description
KB/MS from UK1	PS2 Keyboard/Mouse Connector	6-pin Female
VGA1	Video Graphic Attach Connector	15-pin Female
DVI1	DVI Port Connector	24-pin Connector
USB from UL1/UL2	USB Port Connectors	4-pin Connectors
LAN from UL1/UL2	RJ-45 LAN Connectors	8-pin Connectors
COM1	Serial Port COM Connector	9-pin Connector
AUDIO	Audio Connector	3-phone Jack
ATXPWR	ATX Power Connector	24-pin Block
ATX12V1	ATX 12V Power Connector	8-pin Block
SATA3_4/SATA5	SATAII Connectors	7-pin Connector
SATA1_2	SATAIII Connector	7-pin Connector
USB from UK1	USB Port Connectors	4-pin Connectors
HDMI	High-Definition Multimedia Interface	10-pin Connector

## Headers

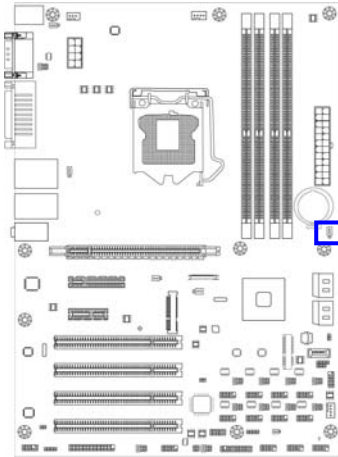
Header	Name	Description
FP_AUDIO	Front panel audio Headers	9-pin block
CDIN	CD Audio-In Header	4-pin Block
SPEAK	Speaker Header	4-pin Block
PWRLED	Power LED	3-pin Block
JW_FP (Front Panel Header)	PWR LED/ HD LED/ /Power Button /Reset	9-pin Block
USB1	USB1 Header	9-pin Block
USB2	USB2 Header	9-pin Block
CPUFAN,SYSFAN2	FAN Speed Headers	4-pin Block
SYSFAN1	FAN Speed Header	3-pin Block
GPIO_CON	GPIO Header	10-pin Block
COM2/3/4/5/6/7/8/9/10	Serial Port Headers	9-pin Block
TX-RXCOM1	RS 232/422/485 port headers	4-pin block
CIR	CIR infrared module Headers	4-pin Block
HDMI_SPDIF	SPDIF Out header	2-pin Block
TPM	TPM Header	19-pin Block
USB3	USB Header	9-pin Block
CASE_OPEN	Case Open Message Display Function	2-pin Block



# Chapter 2 Hardware Installation

## 2-1 Jumper Setting

### (1) JBAT (3-pin): Clear CMOS



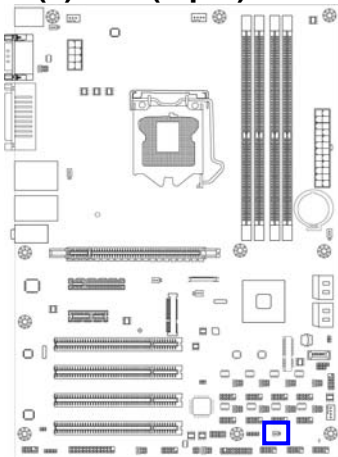
JBAT

1-2 Short: Normal

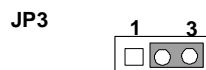
2-3 Short: Clear CMOS

CMOS Clear Setting

### (2) JP3 (3-pin): USB Header Power On Function Setting



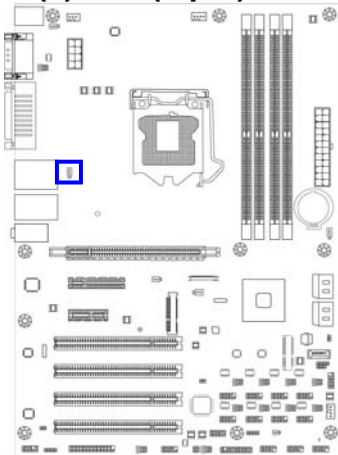
1-2 closed : USB Header POWER-ON Disabled(default)



2-3 closed: USB Header POWER-ON Enabled

\*JP3 is for user to set USB1/USB2/USB3 header power on function.

### (3) JP5 (3-pin): USB Port Power On Function Setting



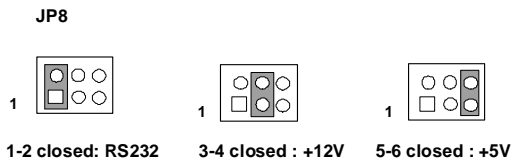
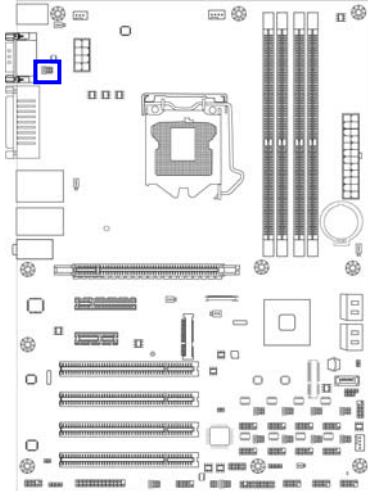
1-2 closed : USB Port POWER-ON Disabled(default)



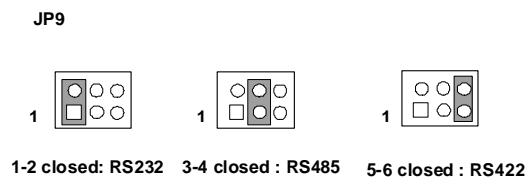
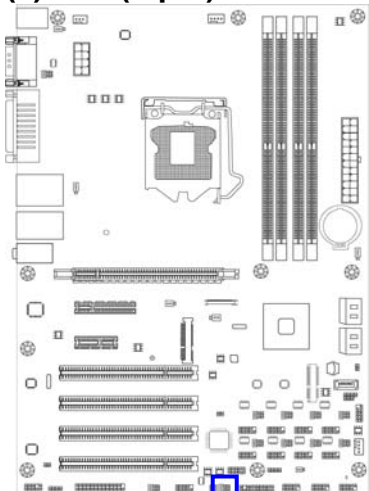
2-3 closed: USB Port POWER-ON Enabled

\*JP5 is for user to set rear IO panel USB port (from UK1/UL1/UL2) power on function.

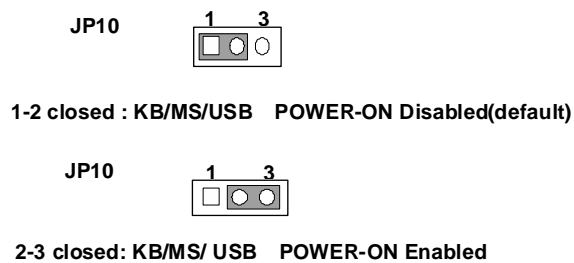
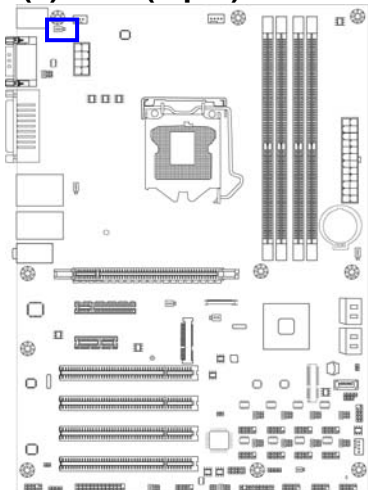
**(4) JP8 (6-pin): COM1 Port Pin9 Function Selecting**



**(5) JP9 (6-pin): COM2 Header RS232/485/422 Function Select**



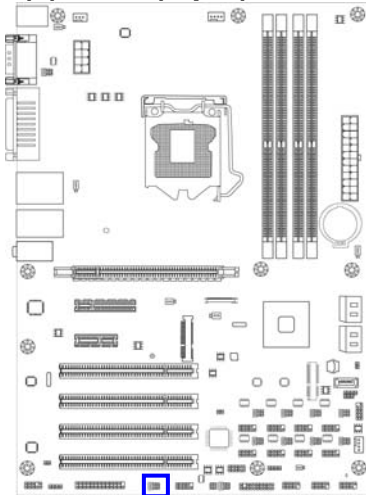
**(6)JP10 (6-pin): KB/MS/USB Power-On Function Setting**



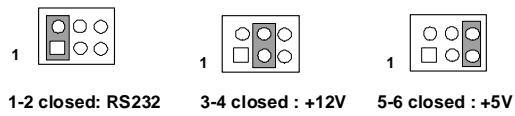
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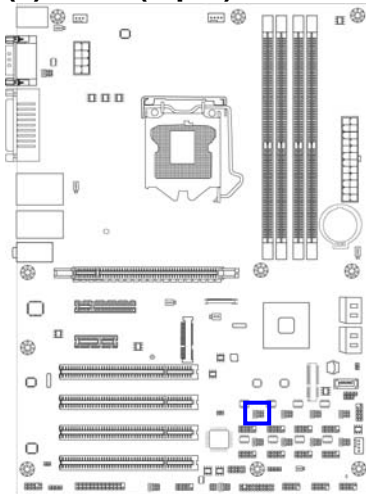
**(7) JP11 (6-pin): COM2 Header Pin9 function select**



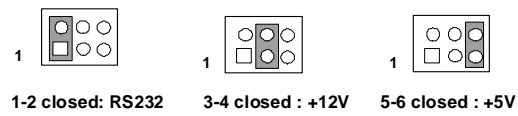
**JP11**



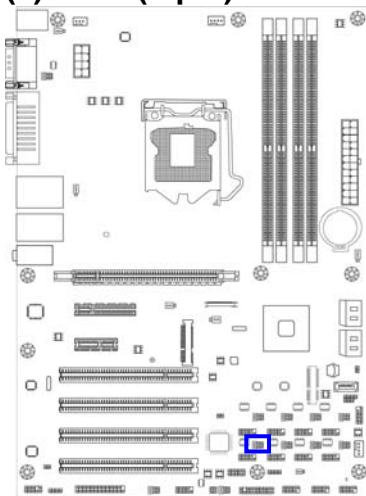
**(8) JP12 (6-pin): COM3 Header Pin9 function select**



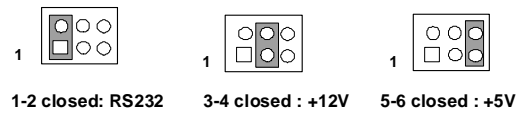
**JP12**



**(9) JP13 (6-pin): COM4 Header Pin9 function select**



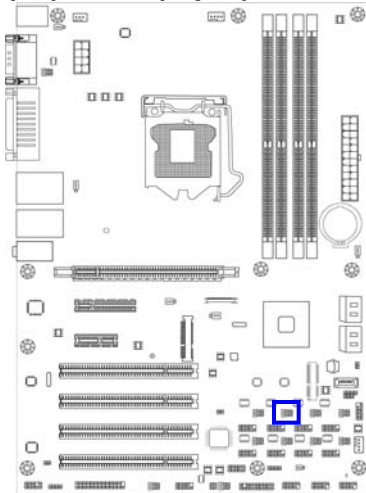
**JP13**



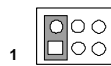
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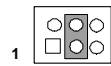
**(10) JP14 (6-pin): COM5 Header Pin9 function select**



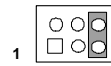
JP14



1-2 closed: RS232

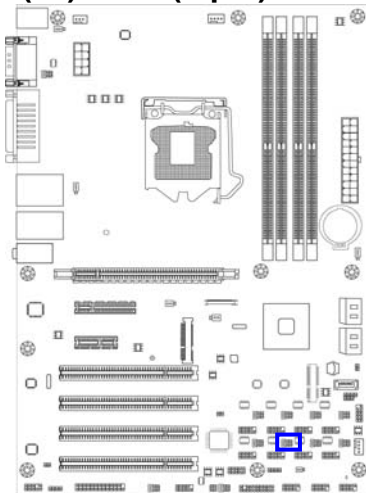


3-4 closed : +12V

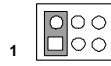


5-6 closed : +5V

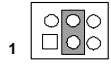
**(11) JP15 (6-pin): COM6 Header Pin9 function select**



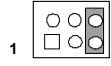
JP15



1-2 closed: RS232

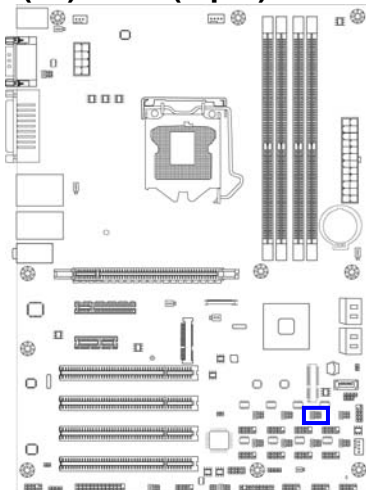


3-4 closed : +12V

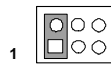


5-6 closed : +5V

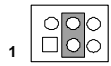
**(12) JP16 (6-pin): COM7 Header Pin9 function select**



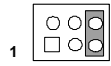
JP16



1-2 closed: RS232



3-4 closed : +12V

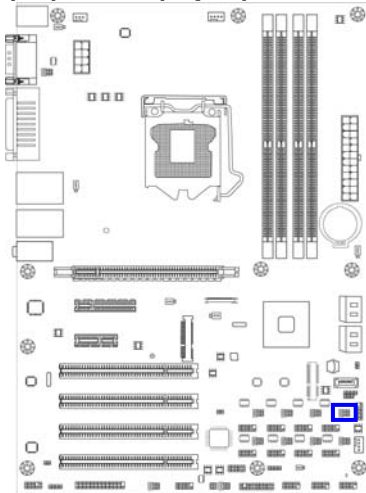


5-6 closed : +5V

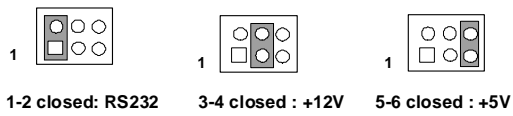
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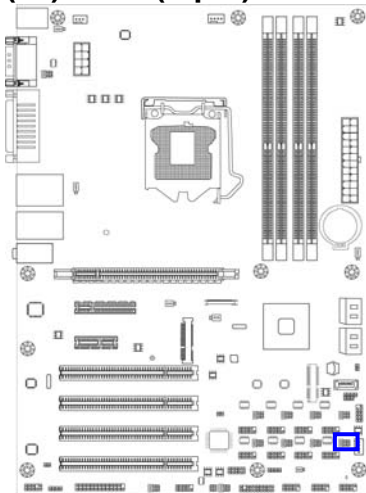
**(13) JP17 (6-pin): COM9 Header Pin9 function select**



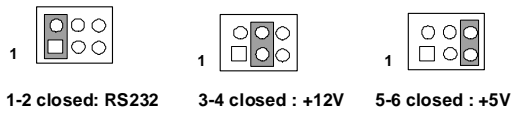
JP17



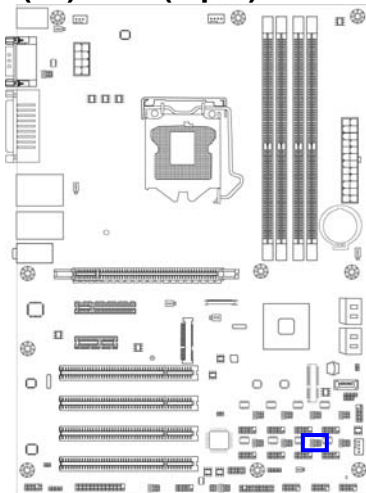
**(14) JP18 (6-pin): COM10 Header Pin9 function select**



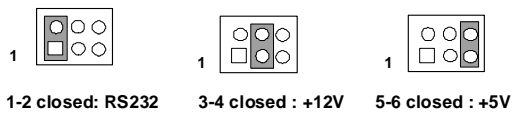
JP18



**(15)JP19 (6-pin): COM8 Header Pin9 function select**



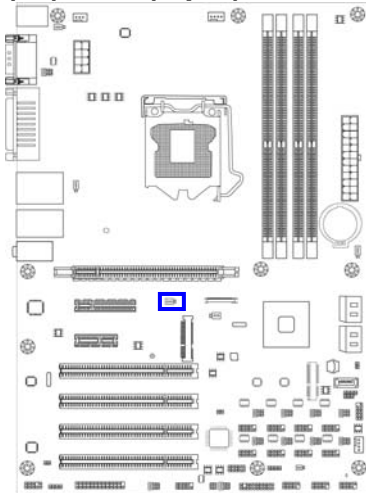
JP19



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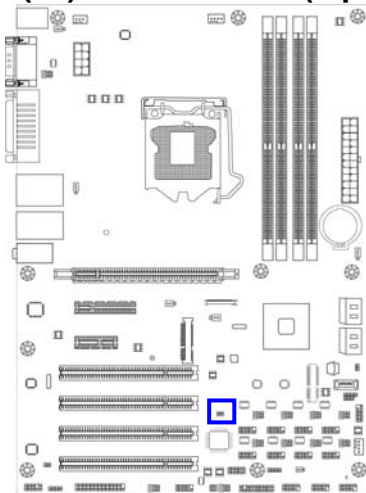
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**(16)JP20 (3-pin): Mini PCI-E Power VCC 3.3V/3.3 VSB Function Select**



1-2 closed : MINI PCI-E VCC= 3.3V      2-3 closed : MINI PCI-E VCC= 3.3VSB

**(17) CASE\_ OPEN (2-pin): Case Open Message Display function select**



**CASE\_OPEN**

1-2 Open: Normal      1-2 Short: Case Open

**Case Open Display Function**

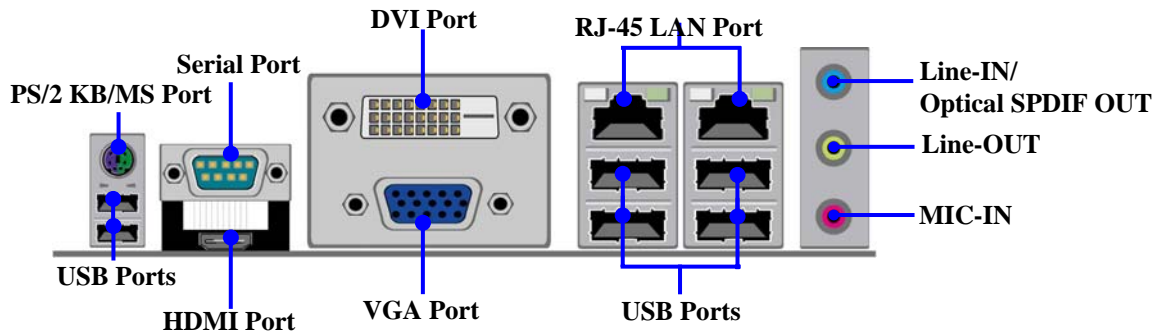
*Pin 1-2 shorted: Case open display function enabled. In this case if your case is removed, next time when you restart your computer a message will be displayed onscreen to inform you of this.*

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## 2-2 Connectors and Headers

### 2-2-1 Rear I/O Back Panel Connectors



#### (1) PS/2 Keyboard Connector: UK1

The connectors are for PS/2 keyboard (Purple) and PS/2 Mouse (Green).

#### (2) D-Sub 15-pin Connector: VGA1

VGA connector is the 15-pin D-subminiature female connector; it is for the display devices, such as the CRT monitor, LCD monitor and so on.

#### (3) Digital Visual Interface: DVI1

This interface standard designed to maximize the visual quality of digital display devices such as flat panel LCD computer displays and digital projectors.

#### (4) USB Port connector: USB ports from UL1/ UL2/UK1

The connectors are 4-pin connector that connects USB devices to the system board.

#### (5) LAN Port connectors: RJ45 LAN ports from UL1/UL2

The connector is standard RJ45 connector for Network. It supports 10/100/1000Mbps data transfer rate.

#### (6) Serial port connector: COM1

COM1 is a 9-pin serial port connector.

#### (7) Audio Line-In, Lin-Out connector: AUDIO

These Connectors are 3 Phone-Jack for LINE-OUT, LINE-IN, MIC audio connections.

<b>Line-in: (BLUE)</b>	Audio input to sound chip
<b>Line-out: (GREEN)</b>	Audio output to speaker
<b>MIC: (PINK)</b>	Microphone Connector

## 2-2-2 Motherboard Internal Connectors

### (1) Power Connector (24-pin block): AXPWR

ATX Power Supply connector: This is a new defined 24-pins connector that usually comes with ATX case. The ATX Power Supply allows using soft power on momentary switch that connect from the front panel switch to 2-pins Power On jumper pole on the motherboard. When the power switch on the back of the ATX power supply turned on, the full power will not come into the system board until the front panel switch is momentarily pressed. Press this switch again will turn off the power to the system board.

- \*\* We recommend that you use an ATX 12V Specification 2.0-compliant power supply unit (PSU) with a minimum of 350W power rating. This type has 24-pin and 4-pin power plugs.
- \*\* If you intend to use a PSU with 20-pin and 4-pin power plugs, make sure that the 20-pin power plug can provide at least 15A on +12V and the power supply unit has a minimum power rating of 350W. The system may become unstable or may not boot up if the power is inadequate.
- \*\* If you are using a 20-pin power plug, please refer to Figure1 for power supply connection. Power plug form power supply and power connectors from motherboard both adopt key design to avoid mistake installation. You can insert the power plug into the connector with ease only in the right direction. If the direction is wrong it is hard to fit in and if you make the connection by force it is possible.

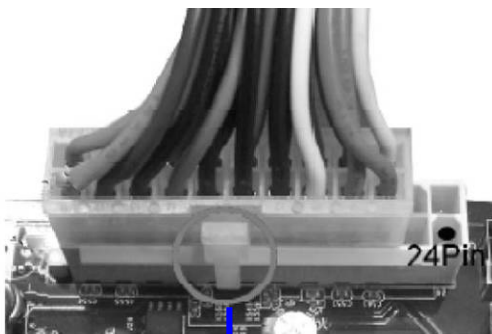
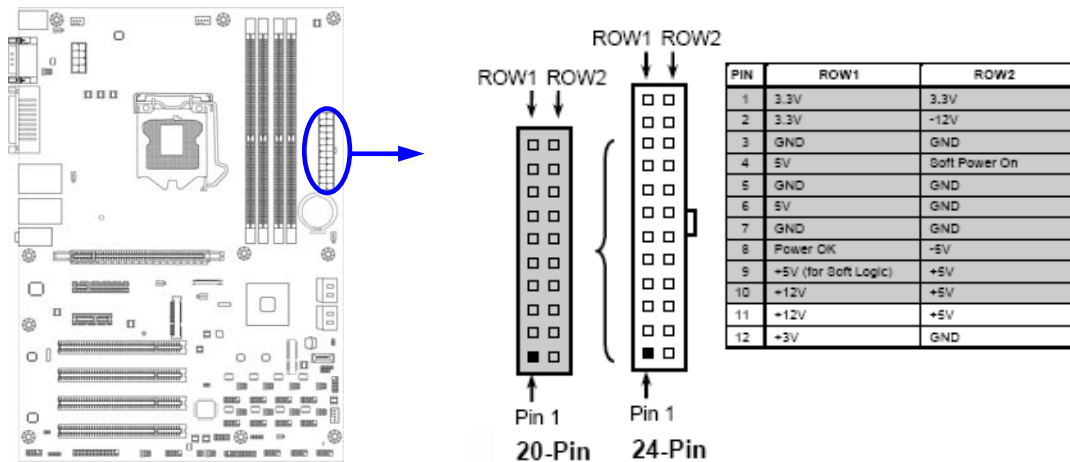


Figure1: 20-pin power plug

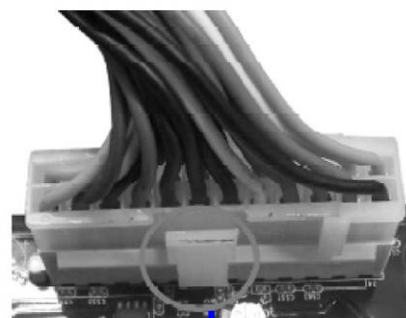


Figure 2: 24 pin power plug

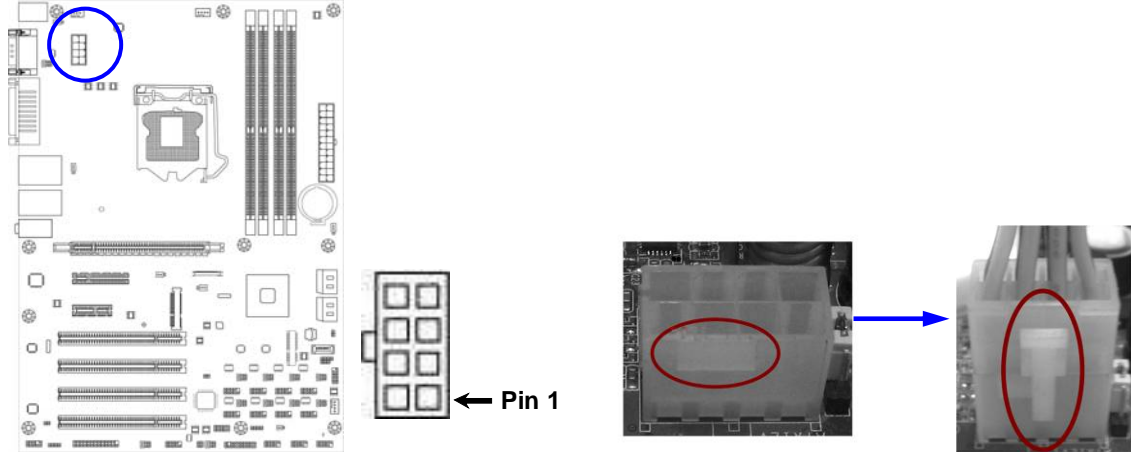


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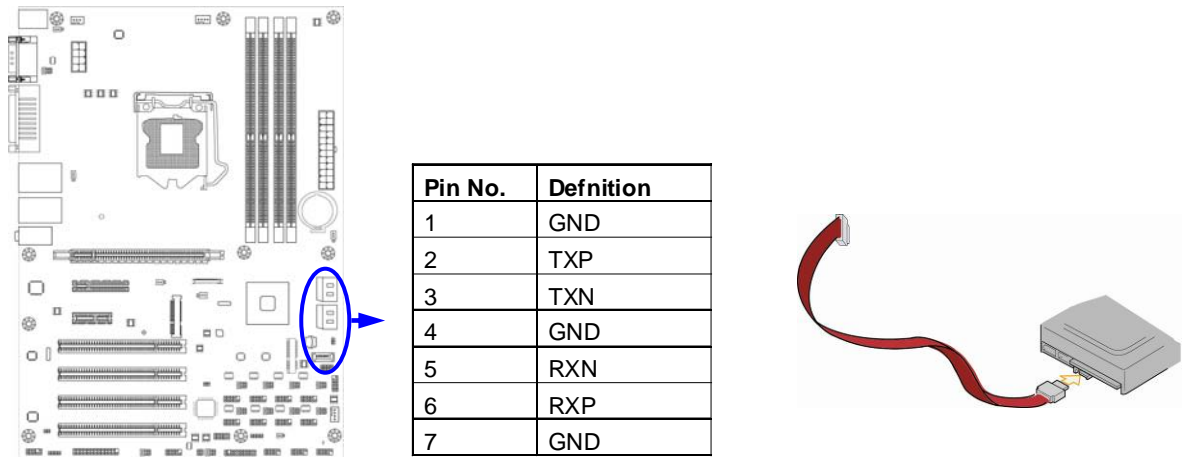
**(2) ATX 12V Power Connector (8-pin block): ATX12V**

This is a new defined 8-pin connector that usually comes with ATX Power Supply. The ATX Power Supply which fully supports AMD AM3 processor must including this connector for support extra 12V voltage to maintain system power consumption. Without this connector might cause system unstable because the power supply can not provide sufficient current for system.



**(3) Serial-ATAII Port connector: SATA1\_2/SATA3\_4/SATA5**

This connector supports the provided Serial ATA3 hard disk cable to connecting the motherboard with SATA2 hard disk.



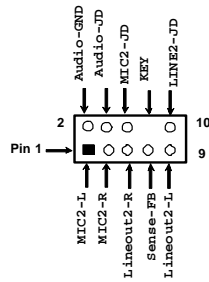
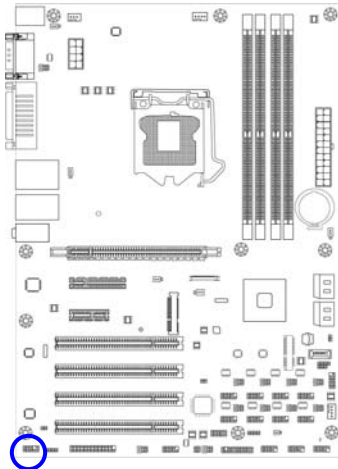
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## 2-2-3 Header Pin Definition

### (1) Line-Out/MIC Header for Front Panel (9-pin): FP\_AUDIO

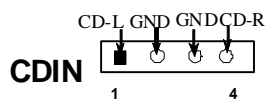
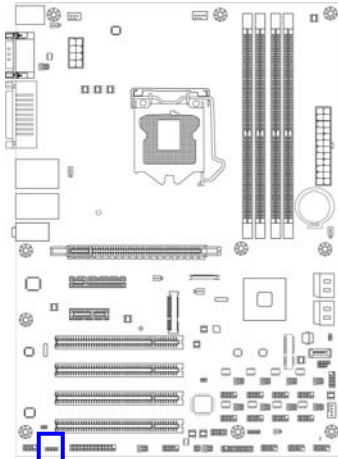
This header is connected to Front Panel Line-out, MIC connector with cable.



Line-Out, MIC Headers

### (2) CD AUDIO-In Headers (4-pin): CDIN

CDIN are the connectors for CD-Audio Input signal. Please connect it to CD-ROM CD-Audio output connector.



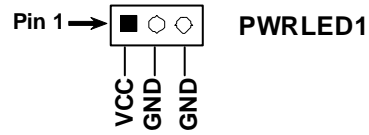
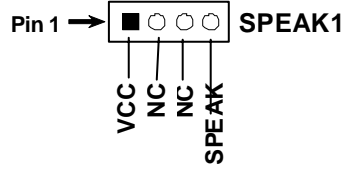
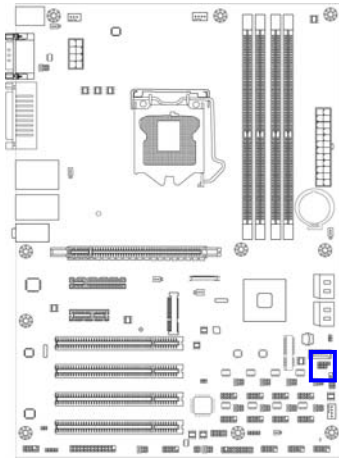
CD Audio-In Headers

### (3) Speaker connector: SPEAK

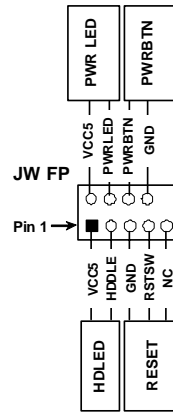
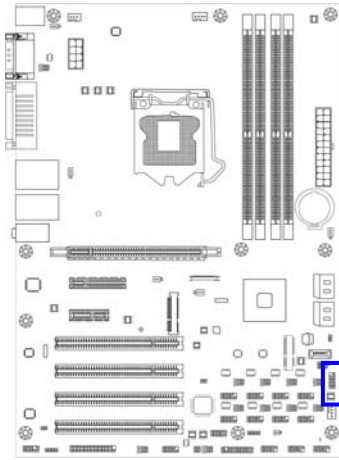
This 4-pin header connects to the case-mounted speaker. See the figure below.

### (4) Power LED: PWR LED

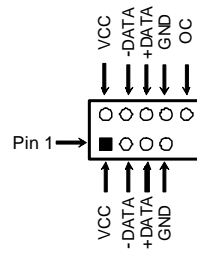
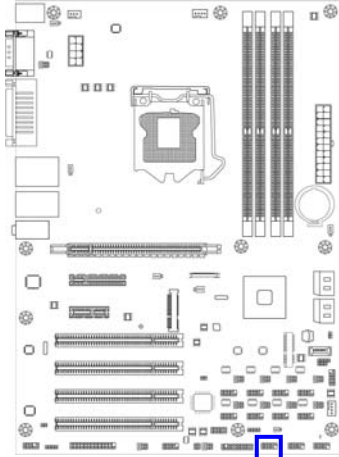
The Power LED header is light on while the system power is on. Connect the Power LED header from the system case to this pin.



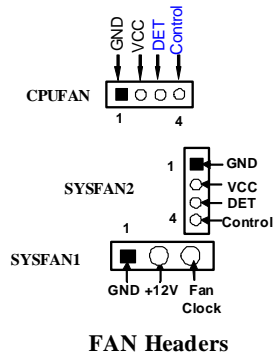
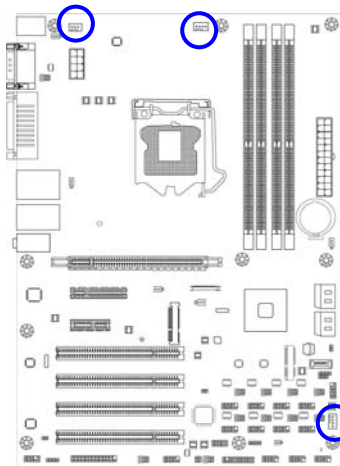
**(5) Front Panel Header: JW-FP**



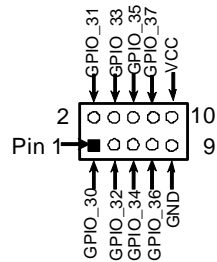
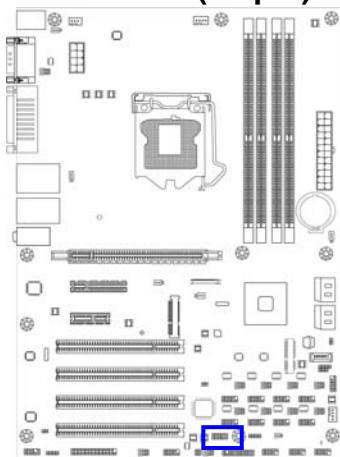
**(6) USB Port Headers (4-pin): USB1/USB2/USB3**



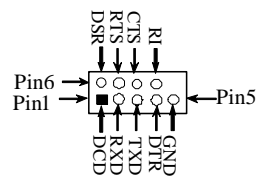
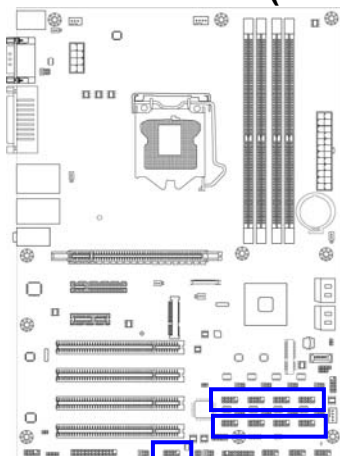
**(7) FAN Power Headers: SYSFAN1 (3-pin); SYSFAN2 (4-pin); CPUFAN (4-pin)**



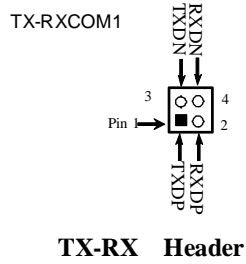
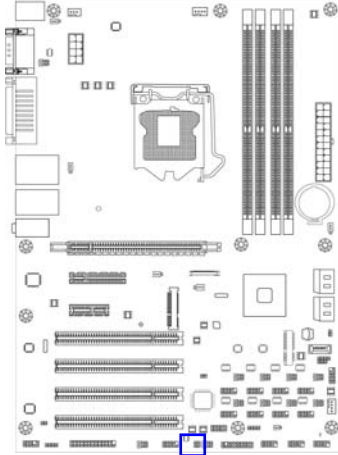
**(8) GPIO Header (10-pin): GPIO\_CON**



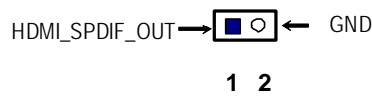
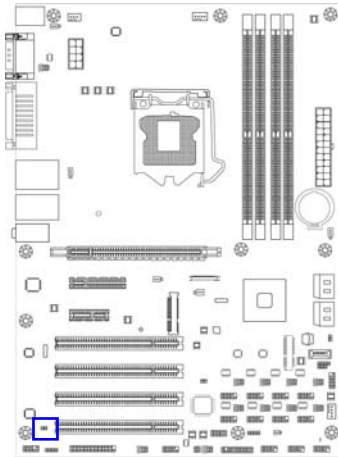
**(9) Serial Port Header (9-Pin): COM2/3/4/5/6/7/8/9/10**



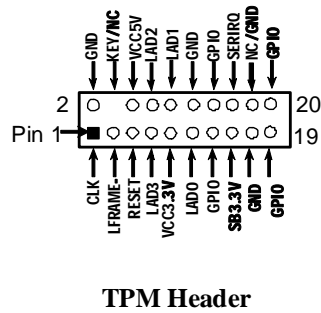
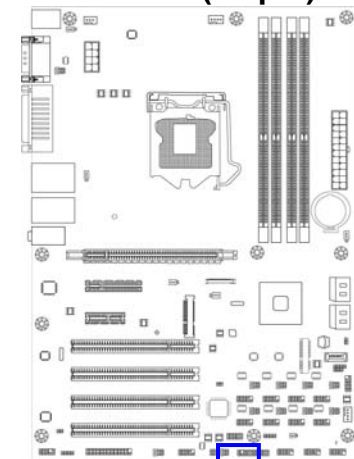
**(10) RS232/422/485 Header (4-pin): TX-RXCOM1**



**(11) HDMI-SPDIF Out header (2-pin): HDMI\_SPDIF**



**(12) TPM Header (19-pin): TPM**



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## Chapter 3

# Introducing BIOS

**Notice!** The BIOS options in this manual are for reference only. Different configurations may lead to difference in BIOS screen and BIOS screens in manuals are usually the first BIOS version when the board is released and may be different from your purchased motherboard. Users are welcome to download the latest BIOS version form our official website.

The BIOS is a program located on a Flash Memory on the motherboard. This program is a bridge between motherboard and operating system. When you start the computer, the BIOS program will gain control. The BIOS first operates an auto-diagnostic test called POST (power on self test) for all the necessary hardware, it detects the entire hardware device and configures the parameters of the hardware synchronization. Only when these tasks are completed done it gives up control of the computer to operating system (OS). Since the BIOS is the only channel for hardware and software to communicate, it is the key factor for system stability, and in ensuring that your system performance as its best.

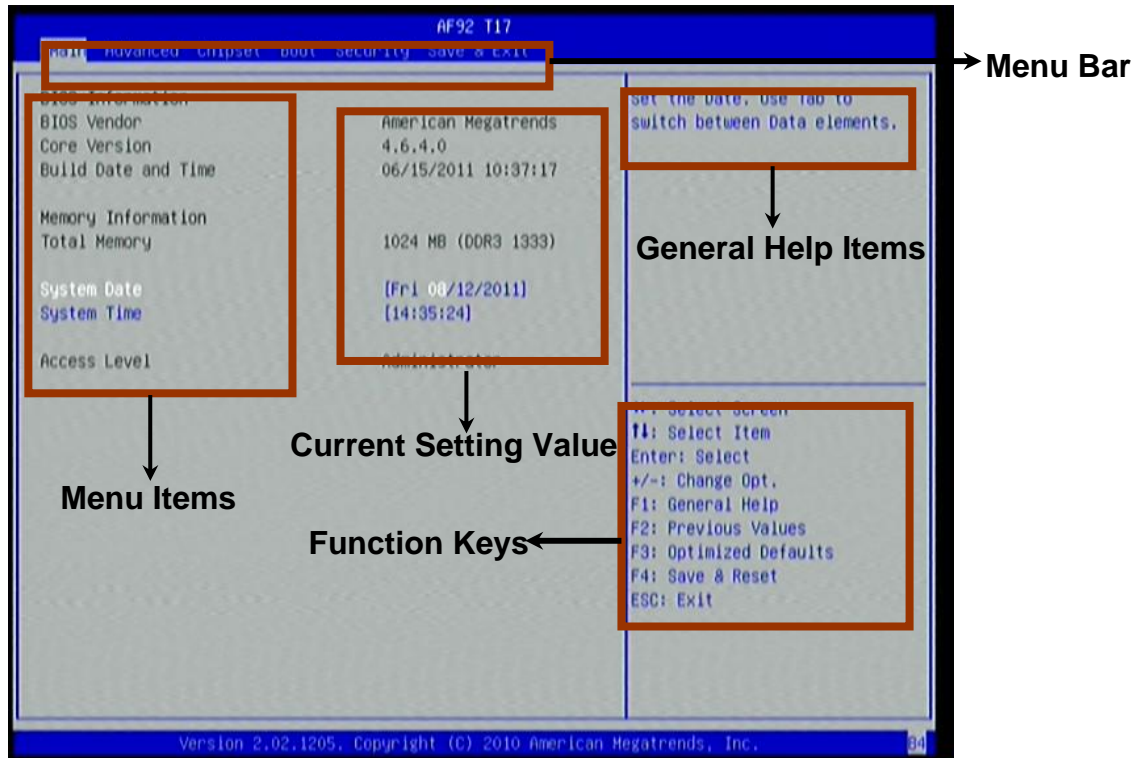
### 3-1 Entering Setup

Power on the computer and by pressing <Del> immediately allows you to enter Setup. If the message disappears before your respond and you still wish to enter Setup, restart the system to try again by turning it OFF then ON or pressing the "RESET" button on the system case. You may also restart by simultaneously pressing <Ctrl>, <Alt> and <Delete> keys. If you do not press the keys at the correct time and the system does not boot, an error message will be displayed and you will again be asked to

Press <Del> to enter Setup

### 3-2 BIOS Menu Screen

The following diagram show a general BIOS menu screen:



BIOS Menu Screen

### 3-3 Function Key

In the above BIOS Setup main menu of, you can see several options. We will explain these options step by step in the following pages of this chapter, but let us first see a short description of the function keys you may use here:

- Press ←→ (left, right) to select screen;
- Press ↑↓ (up, down) to choose, in the main menu, the option you want to confirm or to modify.
- Press <Enter> to select.
- Press <+>/<-> keys when you want to modify the BIOS parameters for the active option.
- [F1]: General help.
- [F2]: Previous value.
- [F3]: Optimized defaults.
- [F4]: Save.
- Press <Esc> to quit the BIOS Setup.

### 3-4 Getting Help

#### Main Menu

The on-line description of the highlighted setup function is displayed at the top right corner the screen.

#### Status Page Setup Menu/Option Page Setup Menu

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Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window, press <Esc>.

### 3-5 Menu Bar

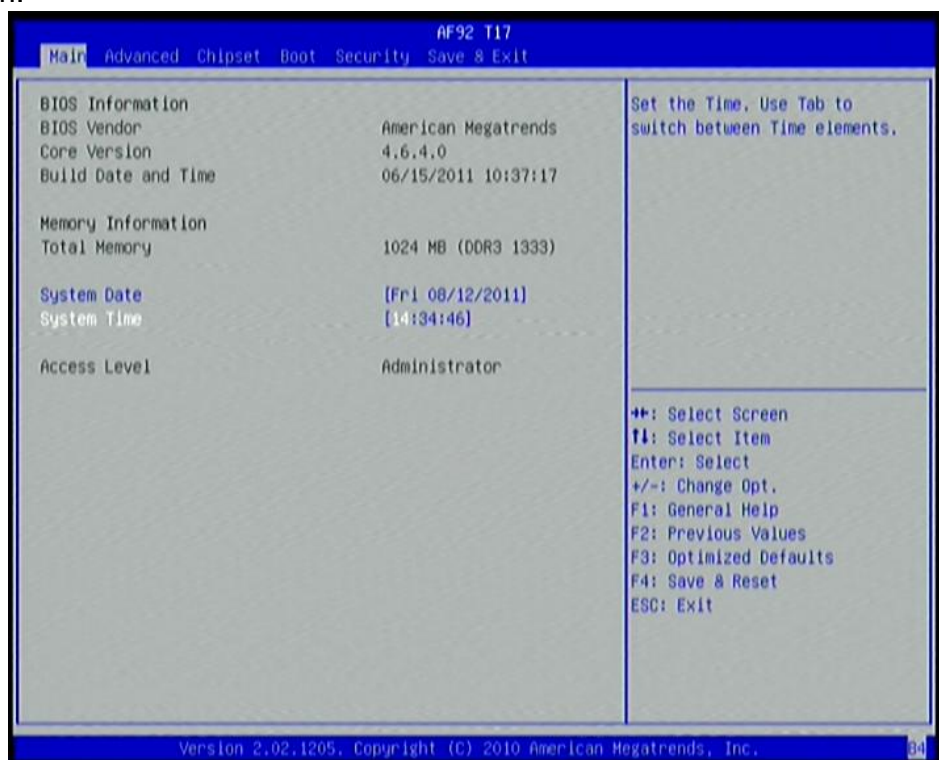
There are six menu bars on top of BIOS screen:

<b>Main</b>	To change system basic configuration
<b>Advanced</b>	To change system advanced configuration
<b>Chipset</b>	To change chipset configuration
<b>Boot</b>	To change boot settings
<b>Security</b>	Password settings
<b>Save &amp; Exit</b>	Save setting, loading and exit options.

User can press the right or left arrow key on the keyboard to switch from menu bar. The selected one is highlighted.

### 3-6 Main Menu

Main menu screen includes some basic system information. Highlight the item and then use the <+> or <-> and numerical keyboard keys to select the value you want in each item.



#### System Date

Set the date. Please use TAB to switch between data elements.

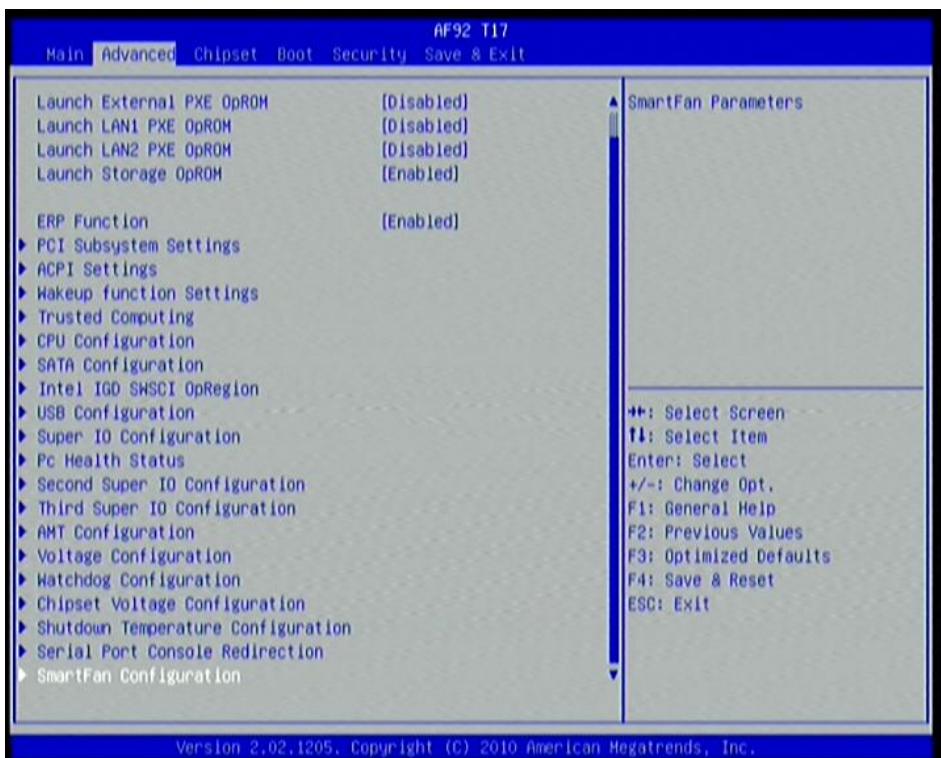
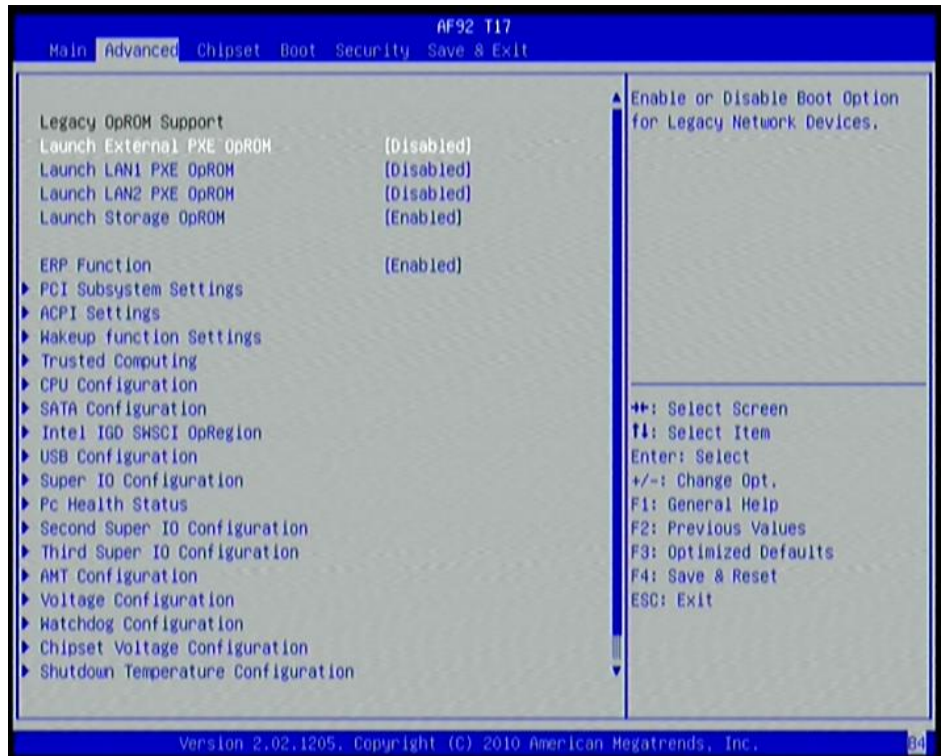
#### System Time

Set the time. Please use TAB to switch between time elements.

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## 3-7 Advanced Menu



### Launch LAN1/LAN2 PXE OpROM

Use this item to enable or disable boot option for legacy network devices.

### Launch Storage OpROM

Use this item to enable or disable boot option for legacy mass storage devices with

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option ROM.

### **ERP Function**

Use this item to enable or disable ERP function for this board.

### **PCI Subsystem Settings**

Press [Enter] to enter and make settings for the following sub-items:

#### **PCI ROM Priority**

The optional settings: [Legacy ROM]; [EFI Compatible ROM].

#### **PCI Latency Timer**

Use this item to select value to be programmed into PCI Latency Timer Register.  
The optional settings: 32/64/96/128/160/192/224/248 PCI Bus Clocks.

#### **VGA Palette Snoop**

Use this item to enable or disable VGA Palette Registers Snoop.

#### **PERR# Generation**

Use this item to enable or disable PCI Device to Generate PERR#.

#### **SERR# Generation**

Use this item to enable or disable PCI Device to Generate SERR#.

#### **Relaxed Ordering**

Use this item to enable or disable PCI express device relaxed ordering.

#### **Extended Tag**

If set as [Enabled] it will allow device to use 8-bit tag filed as a requester.

#### **No Snoop**

Use this item to enable or disable PCI Express device No Snoop option.

#### **Maximum Payload**

Use this item to set maximum payload of PCI Express device or allow system BIOS to select the value.

#### **Maximum Read Request**

Use this item to set maximum read request size of PCI Express device or allow system BIOS to select the value.

#### **ASPM Support**

The optional settings: [Disabled]; [Auto];[Force L0].

#### **Extended Synch**

If set as [Enabled] it will allow generation of extended synchronization patterns.

### **ACPI Settings**

#### **ACPI Sleep State**

Use this item to select the highest ACPI sleep state the system will enter when the suspend button is pressed.

#### **Wakeup Function settings**

#### **Wake System with Fixed Time**

Use this item to enable or disable system wake on alarm event. When set as Enabled, system will wake on the hour/min/sec specified.

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### **Wake System with Dynamic Time**

Use this item to enable or disable system wake on alarm event. When set as [Enabled], system will wake on the current plus increased minute(s).

### **CIR Wakeup**

Use this item to enable or disable CIR wakeup.

### **PS2 KB/MS Wakeup**

Use this item to enable or disable PS2 KB/MS wakeup function.

### **PCI PME Wakeup**

Use this item to enable or disable S3/S4/S5 PCI PME Wakeup function, Support Only Disable EUP.

### **Trusted Computing**

Use this item to enable or disable TPM support. O.S. will not show TPM. Reset of platform is required

### **CPU Configuration**

#### **Socket 0 CPU Information**

Use this item to view the Socket specific CPU Information.

### **Active Processor Cores**

Use this item to select number of cores to enable in each processor package.

### **Limit CPUIO Maximum**

This item should be set as [Disabled] for Windows XP.

### **Execute Disable Bit**

XD can prevent certain classes of malicious buffer overflow attacks when combined with a supporting OS (Windows Server 2003 SP1, Windows XP SP2, SuSe Linux 9.2, RedHat Enterprise 3 Update 3.)

### **Hardware Prefetcher**

Use this item to turn on/off the MLC (L2) streamer prefetcher.

### **Adjacent Cache Line Prefetch**

Use this item to turn on/off prefetching of adjacent cache lines.

### **Intel Virtualization Technology**

The optional settings: [Enabled]; [Disabled].

When set as [Enabled], a VHM can utilize the additional hardware capabilities provided by Vanderpool Technology.

### **Power Technology**

Use this item to enable power management features.

The optional settings are: [Disabled]; [Energy Efficient]; [Custom].

### **SATA Configuration**

#### **SATA Mode**

The optional settings are: [Disabled]; [IDE Mode]; [AHCI Mode]; [RAID Mode].

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### **Serial-ATA Controller 0**

The optional settings are: [Disabled]; [Enhanced]; [Compatible].

### **Serial-ATA Controller 1**

The optional settings are: [Disabled]; [Enhanced].

### **Intel IGD SWSCI OpRegion**

#### **IGD-Boot Type**

Use this item to select the video device which will be activated during POST. This has no effect if external graphics present.

#### **Active LFP**

Use this item to select the Active LFP Configuration.

#### **LCD Panel Type**

Use this item to select the LCD panel used by internal graphics device.

#### **USB Configuration**

##### **Legacy USB Support**

The optional settings are: [Auto];[Disabled]; [Enabled].

##### **EHCI Hand-off**

The optional settings are: [Disabled]; [Enabled].

##### **USB Transfer time-out**

Use this item to set the time-out value for control, bulk, and interrupt transfers.

##### **Device reset time-out**

Use this item to set USB mass storage device start unit command time-out.

##### **Device power-up delay**

Use this item to set maximum time the device will take before it properly reports itself to the host controller. 'Auto' uses default value: for a root port it is 100 ms, for a hub port the delay is taken from hub descriptor.

#### **Super I/O Configuration**

Press [Enter] to enter into the sub-item.

##### **COM1 Port Configuration**

###### **Serial Port**

Use this item to enable or disable serial port (COM).

###### **Change Settings**

Use this item to select an optimal setting for super IO device.

##### **COM2 Port Configuration**

###### **Serial Port**

Use this item to enable or disable serial port (COM).

###### **Change Settings**

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Use this item to select an optimal setting for super IO device.

**Serial Port Mode Select**

Use this item to set serial port as RS232 or RS422/485.

**CIR Controller**

Use this item to enable or disable CIR controller.

**Parallel Port Configuration**

**Parallel port**

Use this item to enable or disable **Parallel port (LPT/LPTE)**

**Change Settings**

Use this item to select an optimal setting for super IO device.

**Device Mode**

Use this item to change the Printer Port.

**PS2 KB/MS Connect**

**Use this item to setting PS2 Connect Primary Devices.**

The optional settings are:[Keyboard First], [Mouse First]

**CIR Controller**

Use this item to enable or disable CIR controller.

**Case Open Detect**

Use this item to detect whether Case has already opened or not. Show message in POST.

**PC Health Monitor**

Press [enter] to view hardware health status.

**Second Super IO Configuration**

**COM3/COM4/ COM5/COM6 Configuration**

**Serial Port**

Use this item to enable or Disable serial port (COM1).

**Change Settings**

Use this item to select an optimal setting for super IO device.

**Third Super IO Configuration**

**COM7/COM8/COM9/COM10 Configuration**

**Serial Port**

Use this item to enable or Disable serial port (COM1).

**Change Settings**

Use this item to select an optimal setting for super IO device.

**AMT Configuration**

The optional settings: [Enabled]; [Disabled].

**Unconfigure AMT/ME**

Use this item to perform AMT/ME unconfigure without password operation.

**Voltage Configuration**

**CPU Vcore 7-Shift**

Use this item to adjust CPU voltage by 7 step value.

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### **AXG Voltage**

Use this item to adjust AGX voltage by 7 step value.

### **CPU VTT**

Use this item to adjust CPU VTT voltage by 7 step value.

### **WatchDog Configuration**

#### **WatchDog Timer Control**

Use this item to enable or disable WatchDog Timer Control. When set as Enabled, the following sub-items shall appear:

#### **WatchDog Timer Value**

User can set a value in the range of 4 to 255.

#### **WatchDog Timer Unit**

The optional settings are: [Second]; [Minute].

### **Chipset Voltage Configuration**

Use this item to choose the Voltage Parameters.

### **Shutdown Temperature Configuration**

Use this item to select system shutdown temperature.

### **Serial Port Console Redirection**

#### **Console Redirection**

The optional settings: [Enabled]; [Disabled].

### **SmartFan Configuration**

#### **CPU FAN Smartfan Mode**

Use this item to enable or disable Smartfan Mode.

#### **3/4 Pin Fan Select**

The optional settings are: [3 pin]/ [4 pin Fan].

#### **SYSFAN1 Smart Mode**

Use this item to enable or disable Smartfan Mode.

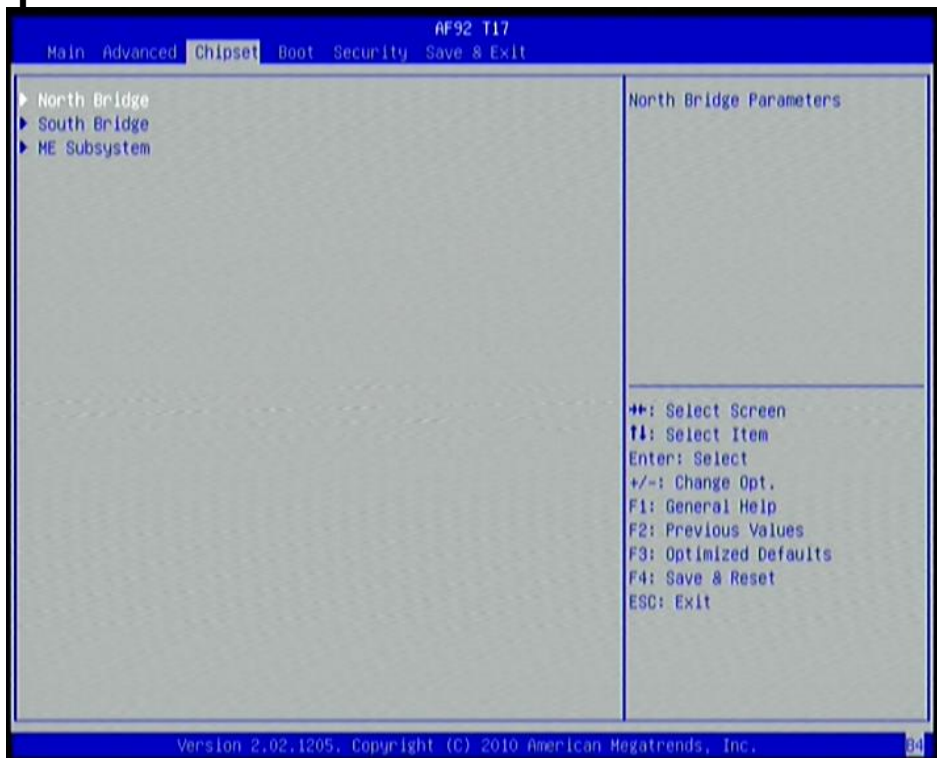
#### **SYSFAN2 Smart Mode**

Use this item to enable or disable Smartfan Mode.

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## 3-8 Chipset Menu



### North Bridge

#### LOW MMIO Align

The optional settings are: [64M]; [1024M].

#### VT-d

Use this item to enable or disable VT-d

#### Initiate Graphics Adapter

Select which graphics controller to use as the primary boot device.

The optional settings are: [IGD]; [PCI/IGD]; [PCI/PEG]; [PEG/IGD]; [PEG/PCI].

#### IGD Memory

Use this item to select IGO Share Memory Size

The optional settings are: [Disable]/[32m]/[64m]/[128m]/[256m]/[512m].

#### IGD Multi-Monitor

Use this item to enable or disable IGD Multi-Monitor by Internal Graphics Device.

#### PCI Express Port

The optional settings are: [Disabled]/[Enabled]/[Auto].

#### PEG Force Gen1

The optional settings are: Enabled]; [Disabled].

#### Detect Non- Compliance Device

Use this item to detect Non- Compliance PCI Express Device in PEG.

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## **South Bridge**

### **Wake on Lan from S5**

Use this item to enable or disable GbE control PME in S5.

### **Onboard Lan1 Device**

Use this item to enable or disable the PCI Express Ports in the Chipset.

### **Restore AC Power Loss**

Use this item to specify what state to go to when power is re-applied after a power failure (G3 State). The optional settings are: [Power Off]; [Power On]; [Last State].

### **SLP\_S4 Assertion Stretch Enable**

The optional settings are: [Enabled]; [Disabled].

### **Deep SX**

#### **Deep SX Configuration**

NOTE: Mobile platforms support Deep S4/S5 in DC only and Desktop platforms support Deep S4/S5 in AC only.

### **Azalia HD Audio**

The optional settings are: [Enabled]; [Disabled].

### **Azalia Internal HDMI Codec**

Use this item to enable or disable internal HDMI codec for Azalia.

### **High Precision Timer**

The optional settings are: [Enabled]; [Disabled].

#### **USB Configuration**

Press [Enter] to further setting USB port configuration.

### **ME subsystem**

#### **ME Subsystem**

Use this item to enable or disable ME subsystem help.

#### **ME Temporary Disable**

The optional settings are: [Enabled]; [Disabled].

### **End of Post Message**

The optional settings are: [Enabled]; [Disabled].

### **Execute MEBX**

The optional settings are: [Enabled]; [Disabled].

#### **MEBX Mode**

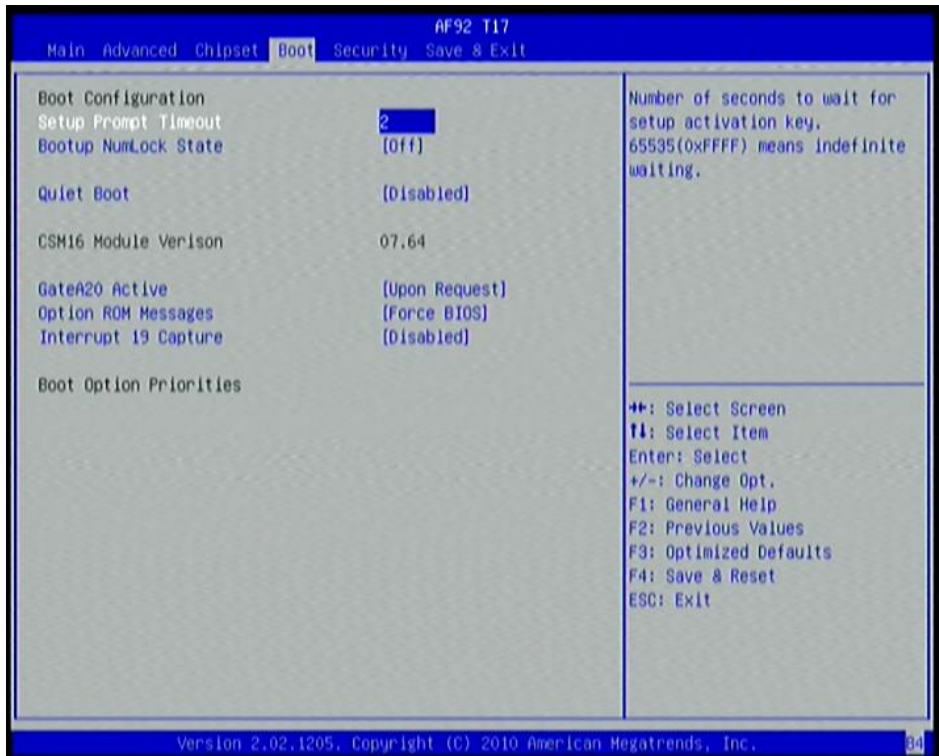
The optional settings are:[normal]/[Hidden Ctrl+p]/Enter MEBX Setup.



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## 3-9 Boot Menu



### Setup Prompt Timeout

Use this item to set number of seconds to wait for setup activation key.

### Bootup Numlock State

Use this item to select keyboard numlock state. The optional settings are: [On]; [Off].

### Quiet Boot

Use this item to enable or disable Quiet Boot option.

### Gate A20 Active

The optional settings are: [Upon Request]; [Always].

### Option ROM Message

Use this item to set display mode for option ROM. The optional settings are: [Force BIOS]; [Keep Current].

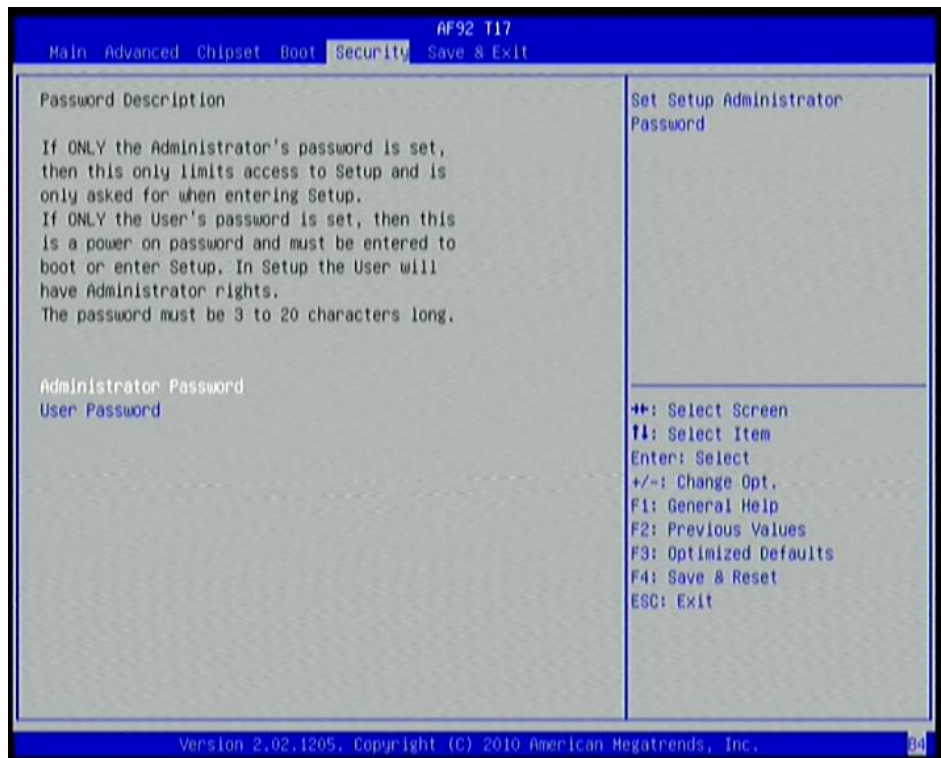
### Interrupt 19 Capture

The optional settings are: [Enabled]; [Disabled].

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## 3-10 Security Menu

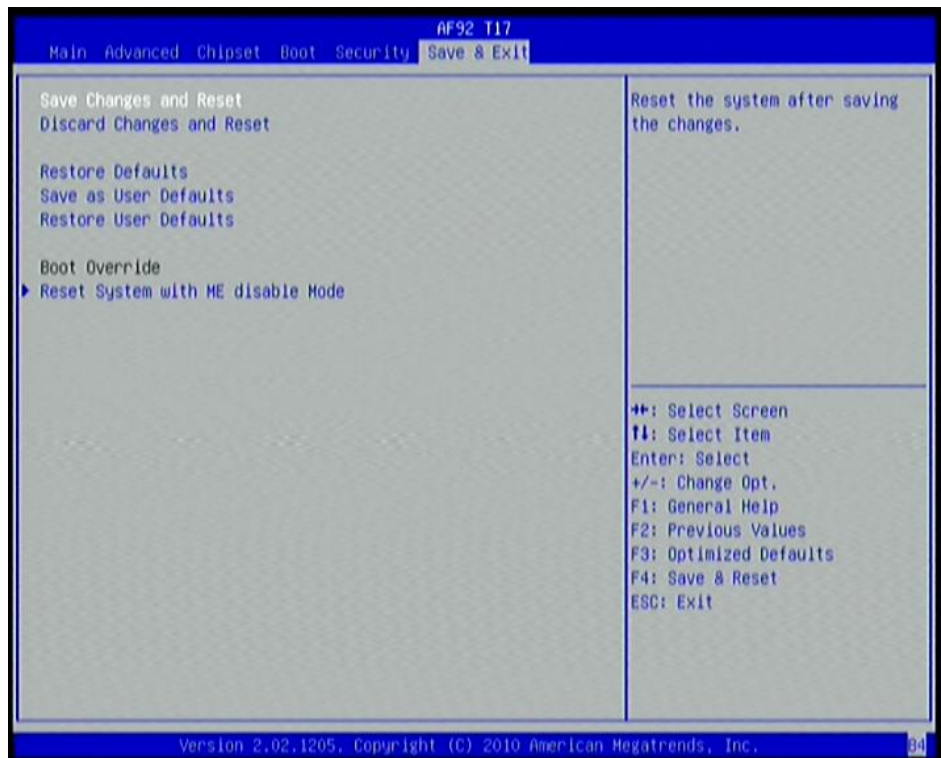


Security menu allow users to change administrator password and user password settings.

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## 3-11 Save & Exit Menu



Save & Exit menu allows user to load optimal defaults, save or discard your changes to BIOS items.