TECHNICAL MANUAL

Of

AMD 780G

Based

Mini-ITX M/B for Socket AM2+

AMD Quad Core Processor

NO.G03-NC81-F

Revision: 2.0

Release date: Oct., 2009

Trademark:

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.

TABLE OF CONTENT

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Manual Revision Information

Reversion	Revision History	Date
2.0	Second Edition	Oct., 2009

Item Checklist

- ☑ Motherboard
- ☑ Cable(S)
- ☑ CD for Motherboard Utilities
- ☑ Motherboard User's Manual
- ☑ Back Panel

Chapter 1

Introduction of the Motherboard

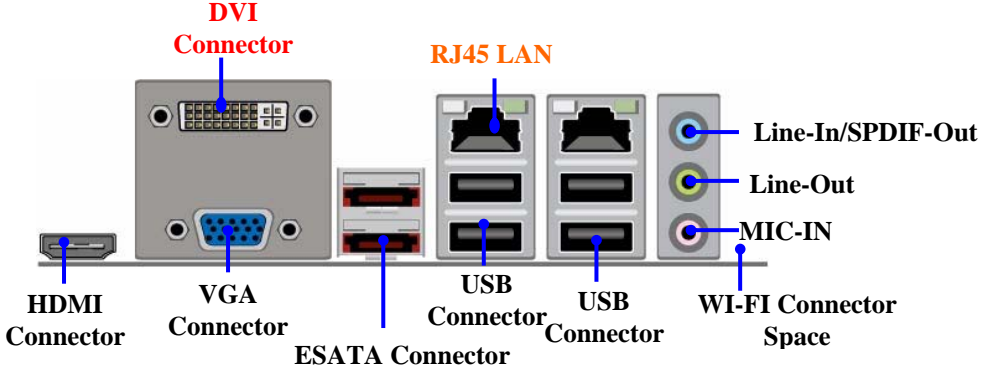## 1-1   Feature of motherboard

* AMD 780G chipset and SB700 chipset.

* Onboard AMD Socket AM2+ CPU, with low power consumption never denies high performance.

* Support HT3.0.

* Support DDRII 533/667/800MHz up to 4GB.

* Onboard Dual RTL 8111C Gigabit Ethernet LAN.

* Integrated Realtek ALC662 6-channel HD audio CODEC

* Support USB2.0 data transport demands.

1-2   Specification

Spec	Description
Design	∗ Mini ITX form factor 6 layers　PCB size: 17.0x17.0cm
Chipset	∗ AMD 780G northbridge chipset ∗ AMD SB700 southbridge chipset
Embedded CPU	∗ Support HT3.0 ∗ Low Power Consumption ∗ AMD SocketAM2+
Memory Socket	∗ 200-pin DDRII SODIMM socket x2 ∗ Support DDRII　533/667/800MHz system Modules DDR memory ∗ Expandable to 4GB.
Expansion Slots	∗ 32-bit PCI slot x 1pcs
Integrate IDE	∗ One PCI IDE controller that supports PCI Bus Mastering, ATA PIO/DMA and the ULTRA DMA 133/100/66 functions that deliver the data transfer rate up to 100 MB/s;
LAN	∗ Integrated Realtek Dual RTL8111C PCI-E LAN. ∗ Support Fast Ethernet LAN function of providing 10Mb/100Mb/1000Mb Ethernet data transfer rate
Audio	∗ Realtek ALC662 6 channel Audio Codec integrated ∗ Audio driver and utility included
BIOS	∗ Award 8MB Flash ROM

1-3 Layout Diagram

ATX 12V Power Connector

ATX Power Connector

HDMI Connector

VGA and DVI Connector

COM Connector

E-SATA Connector

JP1

CPU FAN

USB Port Connector

Audio Connector

WI-FI Connector

SYS FAN2

Front Panel Audio

USB(1,2) Connector

SATAII Connector(1,2,3,4)

IDE Connector

200 pin DDRII DODIMM

SYS FAN1

PCI Slot

Speak connector

Front Panel Connector

ATX12V
ATXPWR
E-SATA1
JP1
CPUFAN
IDE1
SATA4
SATA3
SATA2
SATA1
WI_FI
SYSFAN2
AUDIO2
PCI1
USB1
USB3
JP2
SYSFAN1

ALC662 HD Audio Codec

128Mb GPU

RTL 8111C Gigabit PCI-E
LAN Chip

8 Mbit Flash Rom BIOS

RTL 8111C Gigabit PCI-E
LAN Chip

200 pin DDRII
DODIMM

Jumper

Jumper	Name	Description	Page
JP1	KB/USB Power On Function Setting	3-pin Block	P.7
JBAT	CMOS RAM Clear Function Setting	3-pin Block	p.7

Connectors

Connector	Name	Description	Page
USB1,USB2	USB Port Connector	4-pin Connector	p.8
UL1,UL2	RJ45 LAN Connector		p.8
VGA CN	VGA Port Connector	D-sub15-pin Female	p.8
AUDIO1	Line-Out /MIC/Line-In Audio Connector	3 Phone Jack	p.8
SATA1,2	Serial ATA Connectors		p.8

Headers

Header	Name	Description	Page
USB1,USB2	USB2.0 Port Headers	9-pin Block	p.9
IDE	40-Pin IDE Connector	40-pin IDE Block	p.9
CPUFAN, SFAN1/2	FAN Speed Headers	3-pin Block	P.11
JW_FP1 (PWR LED/ IDE LED/ /Power Button /Reset)	Front Panel Headers (PWR LED/ IDE LED/ /Power Button /Reset)	9-pin Block	P.10
AUDIO2	Front panel audio Headers	14-pin block	P.11
WI-FI	WI-FI Headers	12-pin block	P.11

Chapter 2

2-1 Jumper Setting

(**1**) **JP1** KB/USB Power On Function Setting

JP1

JP1
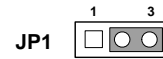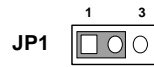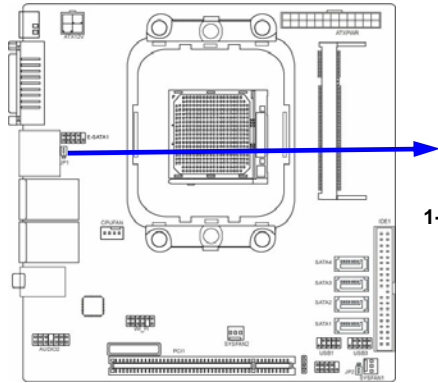
1-2 K.B&USBPOWER-ON Disacled(default)   **2-3 K.B& USB POWER-ON Enabled**

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

JBAT

JBAT
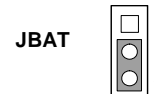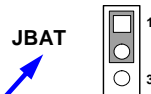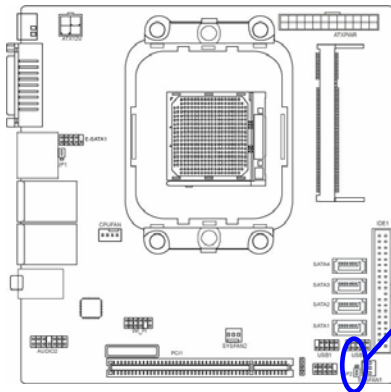
1-2 closed   Normal (Default)   2-3 closed   Clear CMOS

CMOS RAM Clear Setting

2-2　Connectors and Headers
2-2-1 Connectors

DVI
Connector

RJ45 LAN

Line-In/SPDIF
-Out

Line-Out

Mic-In

HDMI
Connect

VGA
Connect

ESATA
Connector

USB
Connect

USB
Connector

WI-FI
Connector
Space
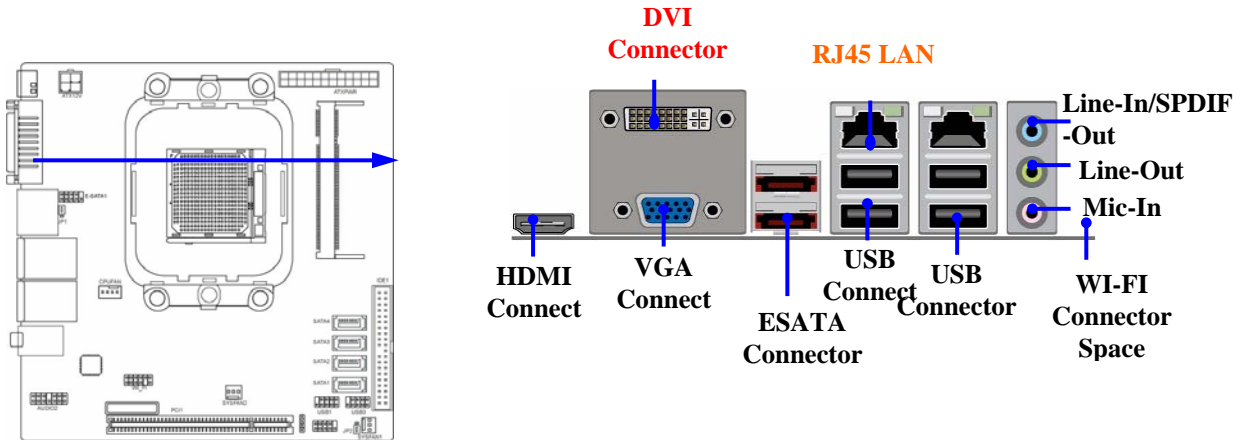
2-2-2 Headers

(1) USB Port Headers (9-pin):
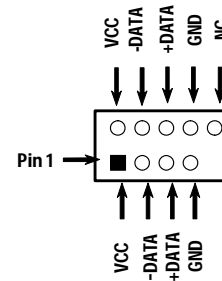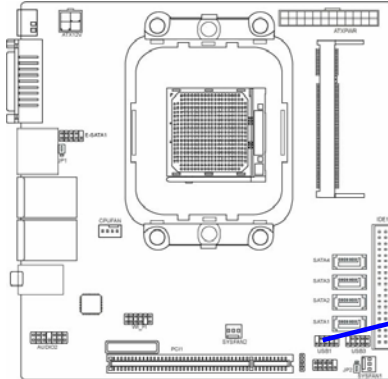
USB Port Header

(2)IDE Connector：
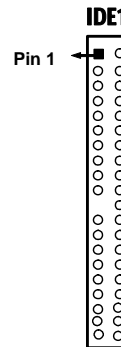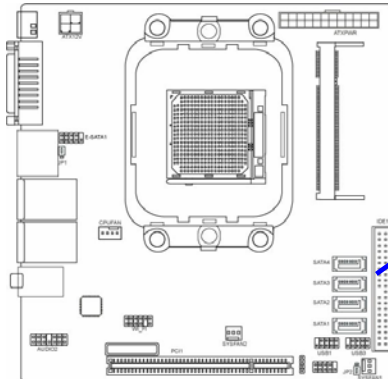
(3) Power switch: FRONT PANEL

JW FP

Power button

Reset button

Power LED

HD-LED
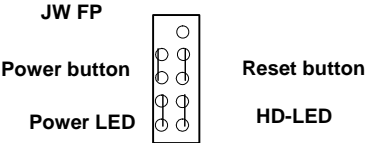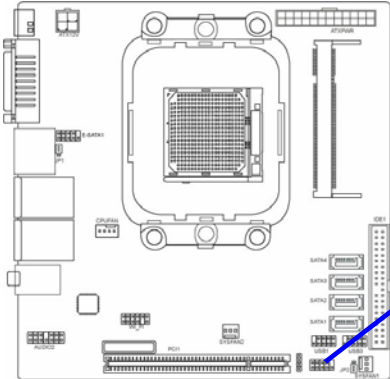
System Case Connections

(4) Serial ATA Connector (7-pin female): SATAII1/SATAII2/SATAII3/SATA4

SATA4

SATA3

SATA2

SATA1
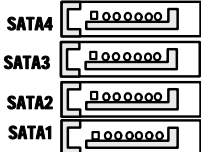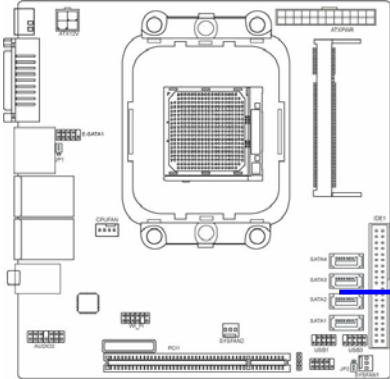
Serial-ATA2 Port Connector

(5) Line-Out, MIC-In Header (14 pin): Audio for front panel

This header connects to Front Panel Line-out, MIC-In connector with cable.
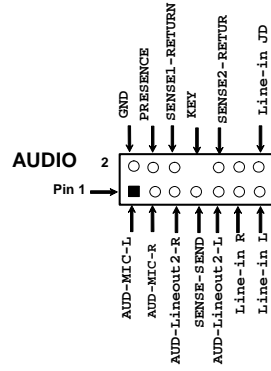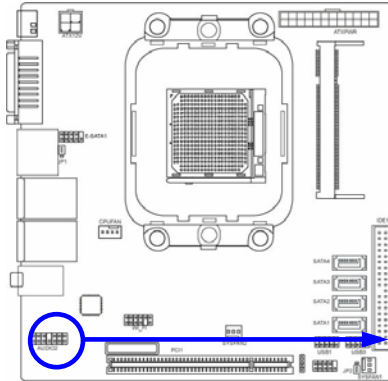
Line-Out, MIC Headers

(7) FAN Headers: CPUFAN(4 pin)

Pin 1: Ground
Pin 2:12V (fan power)
Pin 3: Detect (fan clock)
Pin 4: PWM (fan controller)
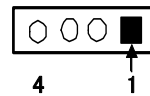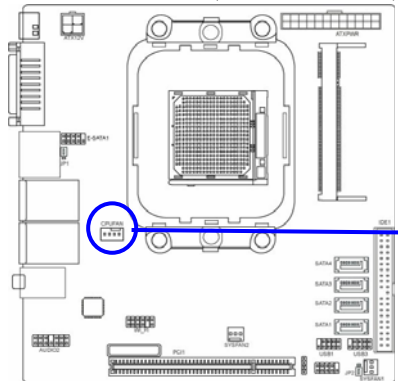
CPUFAN Header

(8) FAN Headers: SYSFAN2 (3 pin), SYSFAN1 (3 pin)
Pin 1: Ground
Pin 2:12V (fan power)
Pin 3: Detect (fan clock)

SYSFAN Header
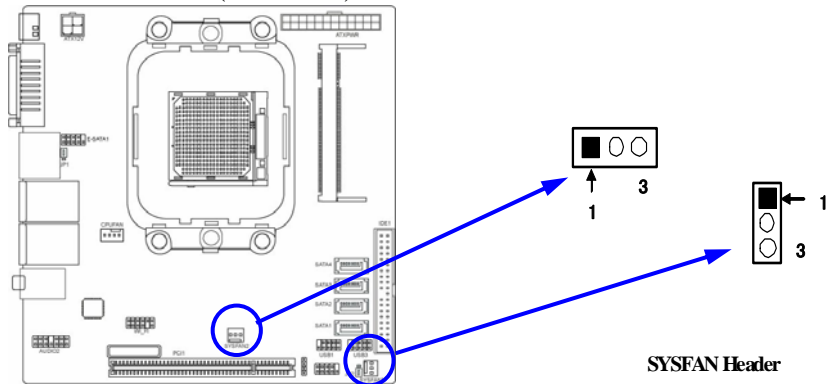
(9) WI-FI Header(optional):
This header supports WI-FI Function. Connect the wireless local area network adapter to this header. It allows you to create a wireless environment and enjoy the convenience of wireless network connectivity.

ADAPTER   **WI-FI Headers**
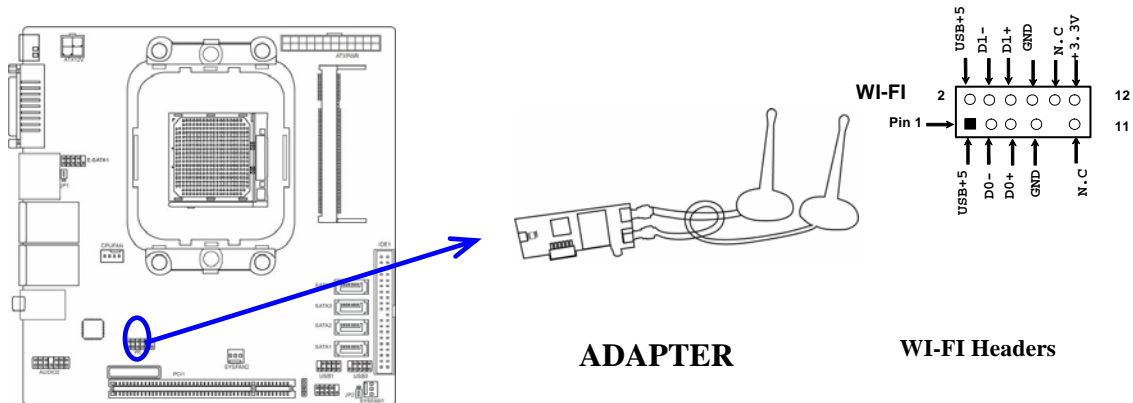
Chapter 3

Introducing BIOS

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.

In the BIOS Setup main menu of Figure 3-1, 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 <Esc> to quit the BIOS Setup.
- Press ↑↓←→ (up, down, left, right) to choose, in the main menu, the option you want to confirm or to modify.
- Press <F10> when you have completed the setup of BIOS parameters to save these parameters and to exit the BIOS Setup menu.
- Press Page Up/Page Down or +/– keys when you want to modify the BIOS parameters for the active option.

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 <F1> to continue, or <Del> to enter Setup

3-2   Getting Help

Main Menu

The on-line description of the highlighted setup function is displayed at the bottom of the screen.

Status Page Setup Menu/Option Page Setup Menu

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>.

3-3   The Main Menu

Once you enter Award® BIOS CMOS Setup Utility, the Main Menu (Figure 3-1) will appear on the screen.   The Main Menu allows you to select from fourteen setup functions and two exit choices.   Use arrow keys to select among the items and press <Enter> to accept or enter the sub-menu.

```
                 Phoenix – AwardBIOS CMOS Setup Utility

┌───────────────────────────────────┬───────────────────────────────┐
│                                    │                               │
│   Standard CMOS Features           │   Thermal Throttling Option   │
│                                    │                               │
│   Advanced BIOS Features           │   Power User Overclock Settings │
│                                    │                               │
│   Advanced Chipset Features        │   Passward Settings           │
│                                    │                               │
│   Integrated Peripherals           │   Load Optimized Defaults     │
│                                    │                               │
│   Power Management Setup           │   Load standard Defaults      │
│                                    │                               │
│   Miscellaneous Control            │   Save & Exit Setup           │
│                                    │                               │
│   PC Health Status                 │   Exit Without Saving         │
├───────────────────────────────────┴───────────────────────────────┤
│    Esc : Quit   F9 : Menu in BIOS    ↑↓→← : Select Item            │
│  F10 : Save & Exit Setup                                            │
└────────────────────────────────────────────────────────────────────┘
```

Figure 3-1

Standard CMOS Features
Use this Menu for basic system configurations.

Advanced BIOS Features
Use this menu to set the Advanced Features available on your system.

Advanced Chipset Features
Use this menu to change the values in the chipset registers and optimize your system's performance.

Integrated Peripherals
Use this menu to specify your settings for integrated peripherals.

Power Management Setup

Use this menu to specify your settings for power management.

Miscellaneous Control

Use this menu to specify your settings for **Miscellaneous Control**.

PC Health Status

This entry shows your PC health status.

Power User Overclock Settings

Use this menu to specify your settings (frequency, Voltage) for overclocking demand

CPU Thermal Throttling Setting

The selection is set for activating the active CPU Thermal Protection by flexible CPU loading adjustment in the arrange of temperature you define.

Load Optimized Defaults

Use this menu to load the BIOS default values these are setting for optimal performances system operations for performance use.

Password Settings

This entry for setting Supervisor password and User password

Save & Exit Setup

Save CMOS value changes to CMOS and exit setup.

Exit Without Saving

Abandon all CMOS value changes and exit setup.

3-4 Advanced BIOS Features

```
                    Phoenix – AwardBIOS CMOS Setup Utility

                           Advanced BIOS Features
┌────────────────────────────────────────────────┬──────────────────────────┐
│  CPU Feature                    Press Enter      │       Item Help          │
│  Hard Disk Boot Priority        Press Enter      │                          │
│  Virus Warning                 Disabled          ├──────────────────────────┤
│  CPU Internal Cache             Enabled          │  Menu Level >            │
│  External Cache                 Enabled          │                          │
│  Quick power on self Test       Enabled          │                          │
│  First Boot Device             Hard Disk         │                          │
│  Second Boot Device             CDROM            │                          │
│  Third Boot Device              LS120            │                          │
│  Boot other  Device             Enabled          │                          │
│  Boot Up NumLock Status         On               │                          │
│  Typematic Rate Setting         Disabled         │                          │
│  Typematic Rate (Chars/Sec)     6                │                          │
│  Typematic Delay (Msec)          250             │                          │
│  Security Option                 Setup           │                          │
│  APIC Mode                      Enabled          │                          │
│  MPS Version Control For OS      1.4             │                          │
│  OS Select For DRAM > 64MB      Non-OS2          │                          │
│  HDD S.M.A.R.T. Capability       Disabled        │                          │
│  Small Logo (EPA)Show           Enabled          │                          │
├────────────────────────────────────────────────┴──────────────────────────┤
│  ↑↓→←  Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  F1:General Help │
│      F5:Previous Values  F6:Optimized Defaults   F7:Standard Defaults       │
└────────────────────────────────────────────────────────────────────────────┘
```

Hard Disk Boot Priority
The selection is for you to choose the hard disk drives priorities to boot from.
Virus Warning

The selection Allow you to choose the VIRUS Warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempt to write data into this area, BIOS will show a warning message on screen and alarm beep.

Disabled (default) No warning message to appear when anything attempts to access the boot sector or hard disk partition table.

Enabled Activates automatically when the system boots up causing a warning message to appear when anything attempts to access the boot sector of hard disk partition table.

CPU Internal Cache

The default value is Enabled.

Enabled (default) Enable cache

Disabled Disable cache

Note: The internal cache is built in the processor.

External Cache

Choose Enabled or Disabled. This option enables the Level 2 cache memory.

Quick Power On Self-Test

This category speeds up Power On Self Test (POST) after you power on the computer. If this is set to Enabled, BIOS will shorten or skip some check items during POST.

Enabled (default) Enable quick POST

Disabled Normal POST

First/Second/Third Boot Device

The BIOS attempts to load the operating system from the devices in the sequence selected in these items. The settings are Floppy, LS/ZIP, HDD-0/HDD-1/HDD-3, SCSI, CDROM, LAD and Disabled.

Boot Up Floppy Seek

During POST, BIOS will determine if the floppy disk drive installed is 40 or 80 tracks. 360K type is 40 tracks while 760K, 1.2M and 1.44M are all 80 tracks.

Boot Up NumLock Status

The default value is On.

On (default) Keypad is numeric keys.

Off   Keypad is arrow keys.

Gate A20 Option

Normal   The A20 signal is controlled by keyboard controller or chipset hardware.

Fast (default)   The A20 signal is controlled by port 92 or chipset specific method.

Typematic Rate Setting

Keystrokes repeat at a rate determined by the keyboard controller. When enabled, the typematic rate and typematic delay can be selected.   The settings are: Enabled/Disabled.

Typematic Rate (Chars/Sec)

Sets the number of times a second to repeat a keystroke when you hold the key down.   The settings are: 6, 8, 10, 12, 15, 20, 24, and 30.

Typematic Delay (Msec)

Sets the delay time after the key is held down before   beginning to repeat the keystroke. The settings are 250, 500, 750, and 1000.

Security Option

This category allows you to limit access to the system and Setup, or just to Setup.

System   The system will not boot and access to Setup will be denied if the correct password is not entered at the prompt.

Setup (default)   The system will boot, but access to Setup will be denied if the correct password is not entered prompt.

HDD S.M.A.R.T Capability

This option allow you to enable the HDD S.M.A.R.T Capability (Self-Monitoring, Analysis and Reporting Technology) . You can choose from Enabled and Disabled.

MPS Version Control For OS   1.4

This option is only valid for multiprocessor motherboards as it specifies the version of the Multiprocessor Specification (MPS) that the motherboard will use.

OS Select For DRAM > 64MB

Allows OS2® to be used with >64MB or DRAM. Settings are Non-OS/2 (default) and OS2. Set to OS/2 if using more than 64MB and running OS/2®.

3-4-1 CPU FEATURE

```
              Phoenix – AwardBIOS CMOS Setup Utility
                          CPU Features

┌──────────────────────────────────────────┬────────────────────┐
│                                           │                    │
│ Virtualization              Enabled       │      Item Help      │
│ AMD K8 Cool & Quiet Control    Disabled    │                    │
│ TLB Check                   Enabled       ├────────────────────┤
│                                           │                    │
│                                           │  Menu Level >       │
│                                           │                    │
├──────────────────────────────────────────┴────────────────────┤
│  ↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  F1:General Help │
│     F5:Previous Values   F6:Optimized Defaults   F7:Standard Defaults      │
└────────────────────────────────────────────────────────────────┘
```

3-5   Intergrated peripherals

```
              Phoenix – AwardBIOS CMOS Setup Utility
                      Intergrated peripheral

┌──────────────────────────────────────────┬────────────────────┐
│ CIMx-SB700 Revision              0.3.1     │                    │
│ Superio Function Setup                    │      Item Help      │
│ Onchip PCI Device            Press Enter   │                    │
│ Onchip IDE Device            Press Enter  ├────────────────────┤
│ Onchip SATA Device           Press Enter  │  Menu Level >>      │
│                                           │                    │
├──────────────────────────────────────────┴────────────────────┤
│  ↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  F1:General Help │
│     F5:Previous Values   F6:Optimized Defaults   F7:Standard Defaults      │
└────────────────────────────────────────────────────────────────┘
```

```
                Phoenix – AwardBIOS CMOS Setup Utility
                        Onchip  Device Function
┌─────────────────────────────────────────────┬──────────────────────────┐
│   Onboard PCIE Lan Deivice          Auto     │                          │
│   Onboard PCIE LAN Bootrom          Disabled │         Item Help        │
│   HD Audio                          Enabled  │                          │
│   Onchip USB Controller             Enabled  ├──────────────────────────┤
│   USB EHCI Controller               Enabled  │    Menu Level >>         │
│   USB keyboard Support              Disabled │                          │
│                                              │                          │
├──────────────────────────────────────────────────────────────────────────┤
│  ↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  F1:General Help │
│       F5:Previous Values  F6:Optimized Defaults   F7:Standard Defaults     │
└──────────────────────────────────────────────────────────────────────────┘
```

Onboard HD Audio

This item allows you to decide to enable/disable the chipset family to support HD Audio. The settings are: Enabled, Disabled.

Onboard PCIE LAN Bootrom

Decide whether to invoke the boot ROM of the onboard LAN chip.

3-6 PC Health Status

This section shows the Status of you CPU, Fan, and Warning for overall system status.   This is only available if there is Hardware Monitor onboard.

```
             Phoenix – AwardBIOS CMOS Setup Utility

                          PC Health Status
┌──────────────────────────────────────────────┬────────────────────┐
│  Show PC Health In Post             Enabled    │                    │
│  Shutdown Temperature               Disabled   │     Item Help      │
│  Smart Fan Configuration            Press Enter│                    │
│  VLDT                               1.38V      ├────────────────────┤
│  VDIMM                              1.97V      │  Menu Level >      │
│  Vcore                              1.33v      │                    │
│  NBVCC                              1.25V      │                    │
│  CPU Temperature                    38c        │                    │
│  SYS Temperature                    58c        │                    │
│  CPU FAN Speed                       255RPM    │                    │
│  SYS FAN1 Speed                        0RPM    │                    │
│  SYS FAN2 Speed                        0RPM    │                    │
├──────────────────────────────────────────────┴────────────────────┤
│   ↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  F1:General Help │
│        F5:Previous Values   F6:Optimized Defaults   F7:Standard Defaults    │
└────────────────────────────────────────────────────────────────────┘
```

Show PC Health in Post

During Enabled, it displays information list below.   The choice is either Enabled or Disabled

CPU Smart FAN Configurations

CPU Full-Speed Temp

This item allows you setting the FAN works in full speed when the temperature over the value which out set.   If the temperature below the value but over the Idle Temperature, the FAN will works over 60% of full speed, and the higher temperature will gain higher FAN speed, after over the temperature which this item setting, the FAN works in full speed.

CPU Idle Temp

This item allows you setting the FAN works in 60% of full speed, when the temperature lower than the temperature which you setting.

Current CPU Temperature/Current System Temp/Current FAN1, FAN2 Speed/Vcore/ Vdd/3.3V/+5V/+12V/-12V/VBAT(V)/5VSB(V)

This will show the CPU/FAN/System voltage chart and FAN Speed.

SFAN Smart Mode:

There are three choose , Disabled, Formula 1, Formula 2.

Disabled: Fan setting full speed.

Formula 1: Fan working low speed, under temperature 2.

Formula 2: Fan stop when under temperature 2.

3-7   Advanced Chipset Features

The Advanced Chipset Features Setup option is used to change the values of the chipset registers.   These registers control most of the system options in the computer.

```
                   Phoenix – AwardBIOS CMOS Setup Utility

                         Advanced Chipset Features
┌──────────────────────────────────────────────┬───────────────────────┐
│ DRAM Configuration            press enter      │                       │
│ HT Link Control               Press Enter      │      Item Help        │
│ PCIE Configuration            press enter      │                       │
│ IGX Configuration             press enter      ├───────────────────────┤
│ HDMI Audio                    Disabled         │                       │
│ NB Power Management           Auto             │   Menu Level >        │
│ Memory Hole                   Disabled         │                       │
│ System BIOS Cacheable         Disabled         │                       │
├────────────────────────────────────────────────┴───────────────────────┤
│   ↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  F1:General Help │
│        F5:Previous Values    F6:Optimized Defaults   F7:Standard Defaults │
└──────────────────────────────────────────────────────────────────────────┘
```

System BIOS Cacheable

Selecting Enabled allows caching of the system BIOS ROM at F0000h-FFFFFh, resulting in better system performance.   However, if any program writes to this memory area, a system error may result.   The settings are: Enabled and Disabled.

3-8   Power Management Setup

The Power Management Setup allows you to configure your system to most effectively save energy saving while operating in a manner consistent with your own style of computer use.

```
                 Phoenix – AwardBIOS CMOS Setup Utility

                          Power Management Setup

    ACPI function                Enabled
    ACPI Suspend Type            S1(POS)              Item Help
    C2 Disable/Enabled           Disabled
    Power Management Option      USER Define
    HDD Power Down               Disabled
    Video Off Method             V/H SYNC+Blank       Menu Level >
    Modem USE IRQ                3
    Soft-off by PWRBTN           Instant-off
    Power on by PCI Card         Disabled
    ACPI XSDT Table              Enabled
    HPET Support                 Enabled
    Power On By Keyboard         Disabled
    Power On By Mouse            Disabled
    RTC Alarm Resume             Disabled
    Date (of Month)              0
    Resume Time (hh:mm:ss)       0:0:0

    ↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  F1:General Help
         F5:Previous Values    F6:Optimized Defaults   F7:Standard Defaults
```

ACPI Function
This item allows you to Enabled/Disabled the Advanced Configuration and Power Management (ACPI).   The settings are Enabled and Disabled.
HDD Power Down (Disabled)
The IDE hard drive will spin down if it is not accessed within a specified length of time.Options are from 1 Min to 15 Min and Disable.
Video Off Method
This determines the manner in which the monitor is blanked.
DPMS (default) Initial display power management signaling.
Blank Screen   This option only writes blanks to the video buffer.

V/H SYNC+Blank   This selection will cause the system to turn off the vertical and horizontal synchronization ports and write blanks to the video buffer.

.MODEM Use IRQ

If you want an incoming call on a modem to automatically resume the system from a power-saving mode, use this item to specify the interrupt request line (IRQ) that is used by the modem. You might have to connect the fax/modem to the motherboard Wake On Modem connector for this feature to work.

Soft-Off by PWRBTN

Under ACPI (Advanced Configuration and Power management Interface) you can create a software power down. In a software power down, the system can be resumed by Wake up Alarms. This item lets you install a software power down that is controlled by the power Button on your system. If the item is set to Instant-Off, then the power button causes a software power down. If the item is set to Delay 4 Sec, then you have to hold the power button down for four seconds to cause a software power down.

RTC Alarm Resume

When set to Enabled, additional fields become available and you can set the date (day of the month), hour, minute and second to turn on your system. When set to 0 (zero) for the day of the month, the alarm will power on your system every day at the specified time .

    Date (of month)

    You can choose which month the system will boot up.   Set to 0, to boot every day.

    Time (hh:mm:ss)

    You can choose what hour, minute and second the system will boot up.

    Note: If you have change the setting, you must let the system boot up until it goes to the operating system, before this function will work.

3-9 Miscellaneous Configuration

```
                    Phoenix - AwardBIOS CMOS Setup Utility

                          Miscellaneous Control

   ┌─────────────────────────────────────────────┬───────────────────────┐
   │ Init Display First          PCI Slot         │                       │
   │ Reset Configuration Data     Disabled        │      Item Help         │
   │ Resources controlled By      Auto            │                       │
   │ IRQ Resources                Press Enter      │                       │
   │ PCI/VGA Palette Snoop        Disabled        │   Menu Level >         │
   │ Assign IRQ for VGA            Enabled        │                       │
   │ Assign IRQ for USB            Enabled        │                       │
   │ PCI Latency Timer(clk)        64             │                       │
   │ PCI Express relative items                   │                       │
   │ Maximum payload size          4096           │                       │
   │                                              │                       │
   ├──────────────────────────────────────────────┴───────────────────────┤
   │   ↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  F1:General Help │
   │        F5:Previous Values   F6:Optimized Defaults  F7:Standard Defaults │
   └───────────────────────────────────────────────────────────────────────┘
```

Reset Configuration Data

If you enable this item and restart the system, any Plug and Play configuration data stored in the BIOS Setup is cleared from memory.

3-10 Power User Overclock Setting

Phoenix – AwardBIOS CMOS Setup Utility

Power User Overclock Setting

CPU Vcore 7-shift	Normal	Item Help
VDIMM Select	1.95v	
NB Voltage setting	1.15v	Menu Level >

↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
    F5:Previous Values   F6:Optimized Defaults   F7:Standard Defaults

Phoenix – AwardBIOS CMOS Setup Utility

CPU VOLTAGE at NEXT BOOT

CPU Vcore 7-shift   Normal

 VDIMM Select   1.95v

 NB Voltage setting   1.15v

Item Help

Menu Level >

CPU Vcore 7-shift

Normal   [ ]
+5%   [ ]
+10%   [ ]
....
+35%   [ ]

↑↓:Move ENTER:Accept
ESC:Abort

↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
    F5:Previous Values   F6:Optimized Defaults   F7:Standard Defaults

```
              Phoenix – AwardBIOS CMOS Setup Utility
                         CPU  VCORE  7---SHIFT

  CPU Vcore 7-shift              Normal              Item Help

  VDIMM Select                   1.95v

  NB Voltage setting             1.15v             Menu Level >


                                            VDIMM Select

                                              1.85v      [  ]
                                              1.90v      [  ]
                                              1.95v      [  ]
                                              2.00v      [  ]
                                            ↑↓:Move ENTER:Accept
                                            ESC:Abort

     ↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  F1:General Help
         F5:Previous Values   F6:Optimized Defaults  F7:Standard Defaults
```

CPU **Vcore**

This item allows you select the CPU Vcore Voltage xx% more than the standard value, by this function for the precise over-clocking for extra demanding of performance.

NB Voltage

This item allows you to select value of Voltage for North Bridge Chipset.