

PM915-478 Mainboard

User' s Manual

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Chapter 1 Introduction

1.1 Chipset Introduction

Intel 915GL Chipset

The Intel 915GL chipset supports the latest PC technologies such as Socket 478 CPU, dual-channel DDR memory architecture and AGPe graphics card interface. Intel Graphics Media Accelerator 900 provides a significant increase in graphics performance. 8 high-speed USB 2.0 ports.

Dual-channel DDR

This Intel 915GL chipset motherboard support TWO DDR DIMM interface that can make you have more use room. Dual-channel can give you the fastest frequency.

1.2 Specification

INTEL 915GL

- ◆ Intel 915GL + ICH6
- ◆ Supports Socket 478 CPU
- ◆ Supports 400/533/800MHz HOST BUS Frequency
- ◆ Intel Graphics Media Accelerator 900 VGA
- ◆ Dual channel Mode DDR 266/333/400MHz
- ◆ Supports One AGPe (Accelerated Graphics Port Extension) slot
- ◆ Supports Two PCI Slot
- ◆ Supports six channel sound input
- ◆ Supports Eight USB2.0 ports

1.3 Mainboard Introduction

Key Features:

-Chipset:

Intel 915GL+ICH6

-CPU:

Supports Intel Socket 478 CPU

-Supports 400/533/800MHz HOST BUS Frequency

-Memory:

Supports DDR 266/333/400MHz Memory

- Built-in Powerful Integrated Graphics
 - Integrated display function technologies without extend VGA card
 - Integrated 2D/3D Graphics Controller

- Provides one channel connecting two IDE drives
 - Supports Ultra ATA66/100 synchronous DMA modes
- Provides four channel connecting four SATA drives
 - With speed up to 150MB/s

- I/O :
 - One floppy port support format 360K/720K/1.2M/1.44M/2.88M disk driver
 - One serial port
 - One parallel port, supports EPP/ECP/SPP transfers
 - Eight USB2.0 ports
 - One PS/2 port
 - Two SATA ports
 - One Realtek RTL8111C PCI-E 10/100 Mbps LAN Network

- Onboard AC' 97 2.3 specification compliant
 - Supports six channel sound input (example Realtek ALC653)

- Expansion slot:
 - One AGPe (Accelerated Graphics Port Extension) slot
 - Two 32-bit PCI slots 2.2 specification compliant

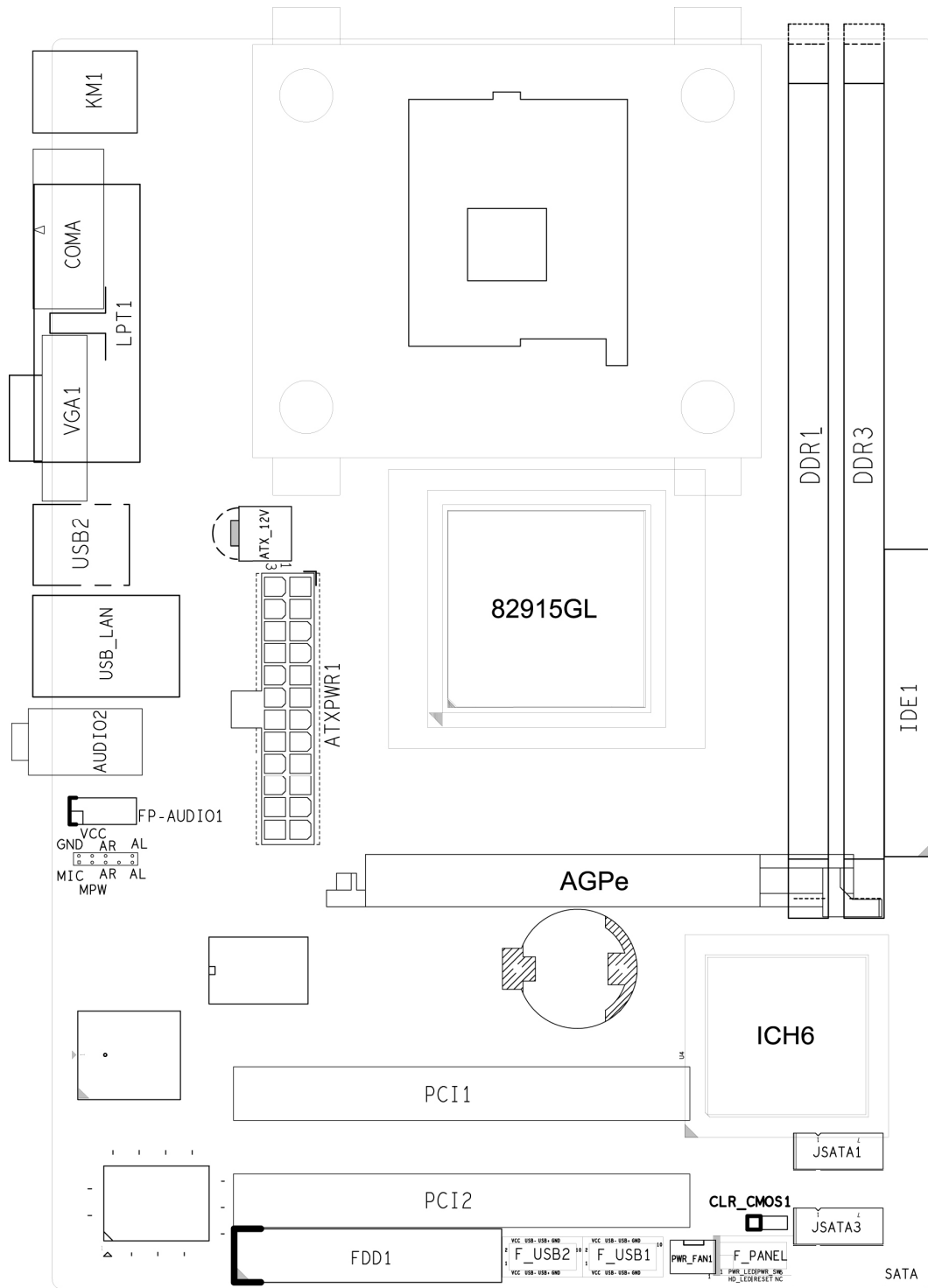
- Dimension
 - Micro-ATX form factor

Chapter 2 Package Contents

Your mainboard package contains the following items:

- 1 One Intel 915GL serial mainboard
- 2 One 40-pin Ultra DMA 66/100/133 IDE ribbon cable
- 3 SATA data cable
- 4 Driver installed CD
- 5 One user' s manual

Chapter 3 Mainboard Locations



Chapter 4 Installation

4.1 Jumper Setting and Slot

Clear CMOS Jumper setting

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

Audio: Front panel Jumper setting

PIN	Function	PIN	Function
1	MIC+	2	Ground
3	Vbias	4	AuD_Vcc (AVCC)
5	AuD_R_Out	6	R_Out Back
7	N. C.	8	Key
9	AuD_L_Out	10	L_Out Back

SATA: PIN Jumper setting

PIN	SATA1 Function	PIN	SATA3 Function
1	Ground	1	Ground
2	RSATA_RXP1	2	RSATA_RXP3
3	RSATA_RXN1	3	RSATA_RXN3
4	Ground	4	Ground
5	RSATA_TXN1	5	RSATA_TXN3
6	RSATA_TXP1	6	RSATA_TXP3
7	Ground	7	Ground

Expansion slot

DIMM1/DIMM2	184 PIN DDR MEMORY SLOT
PCI1/PCI2	120 PIN PCI BUS expansion slots
AGPe	AGPe slot (Accelerated Graphics Port Extension)

USB: Expansion Connector

PIN	Function	PIN	Function
1	VCC: Power	2	VCC: Power
3	D-: Data - Signal	4	D-: Data - Signal
5	D+: Data + Signal	6	D+: Data + Signal
7	GND: Ground	8	GND: Ground
9	KEY	10	NC

Connectors

PS/2 (Bottom)	PS/2 Keyboard (Purple)
PS/2 (Top)	PS/2 Mouse Header (Green)
R_USB1	USB1/2 Connector Port
F_USB2/LAN	USB3/4/LAN Connector Port
F_USB3	USB5/6 Connector Port
F_USB4	USB7/8 Connector Port
LPT	Printer Connector Port
COM1	Serial Port COM1 Connector Port
VGA	On-board VGA connector
LINE OUT/LINE IN/MIC	Audio Output/Audio Input/Microphone
SPDIF_I/ SPDIF_0	Digital Input/Output Port
IDE	Primary/Secondary IDE Port
SATA1/SATA3	SATA Port
FDD	Floppy Disk Drive Connector Port
ATX/ATX_12V	ATX/ATX_12V Power Supply Connector Port
CPU_FAN/PWR_FAN	CPU/System FAN Port

Function Port Panel

Power Supply LED	Pin2: Power Supply Anode; Pin4: Ground
HDD LED	Pin1: Power Supply Anode; Pin3: LED Signal
Power Supply Switch	Pin6, 8: Switch Signal
Reset Switch	Pin5, 7: Reset Switch

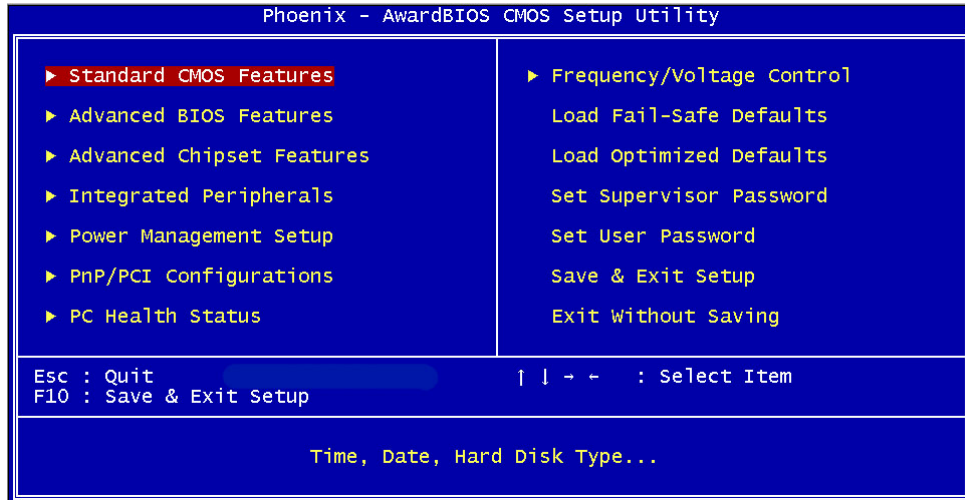
Chapter 5 BIOS Setup

The BIOS Setup Utility record settings and information of your computer, such as date and time, the type of hardware installed, and various configuration settings. Your computer applies those information to initialize all the components when booting up and basic function of coordination between system components.

If the Setup Utility configuration is incorrect, it may cause the system to malfunction. It can even stop you computer booting properly. If it happens, you can use the clear CMOS jumper to clear the CMOS memory which

has stored the configuration information; or you can hold down the Page Up key while rebooting your computer. Holding down the Page Up key also clears the setup information

5.1 Main menu

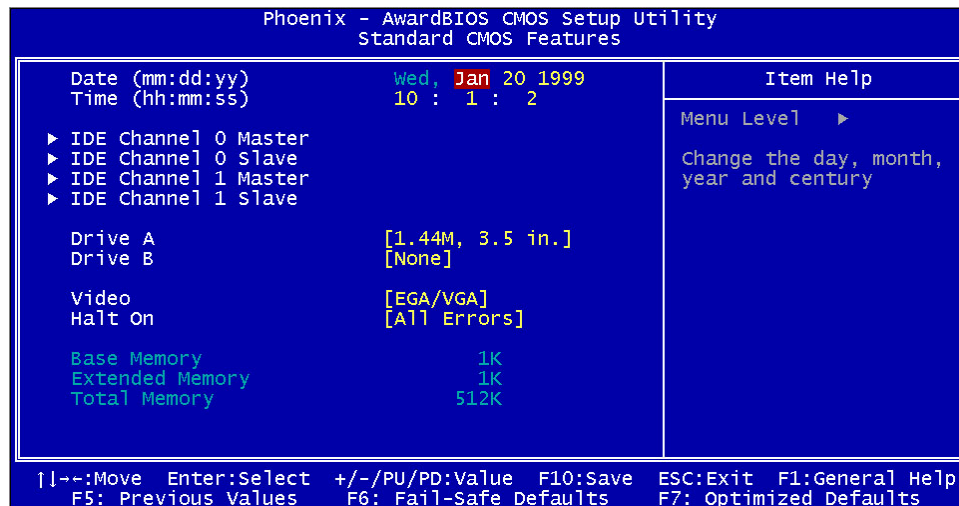


You can use cursor arrow keys to highlight anyone of options on the main menu page. Press **Enter** to select the highlighted option. Press the **Escape** key to leave the setup utility. Press the **F9** key to go back to menu in BIOS. Some options on the main menu page lead to tables of items with installed value that you can use cursor arrow keys to highlight on item, and press **Page Up** and **Page Down** keys to cycle through alternative values of that item. The other options on the main menu page lead to dialog boxes that require your answer Yes or No by hitting the Y or N keys. If you have already changed the setup utility, press F10 to save those changes and exit the utility.

- ✧ Standard CMOS Features
Setup date, time, floppy type
- ✧ Advanced BIOS Features
Setup BIOS provides function, for example virus, boot-strap induct
- ✧ Advanced Chipset Features
Setup mainboard chipset parameter, for example DRAM Timing
- ✧ Integrated Peripherals
Setup include mainboard all peripherals drive
- ✧ Power Management Setup
Setup CPU, Hard disk, Monitor drive power save mode
- ✧ PnP/PCI Configurations
Setup PnP and PCI interface parameter
- ✧ PC Health Status
- ✧ Frequency/Voltage Control

- ✧ Load Fail-Safe Defaults
Setup the default values in system
- ✧ Load Optimized Defaults
Setup the best performance values in system
- ✧ Set Supervisor Password
Setup supervisor password in system
- ✧ Set User Password
Setup user password in system
- ✧ Save & Exit Setup
Setup save and exit, press Y to save and exit
- ✧ Exit Without Save Setup
Setup without save and exit, press N to without save and exit

5.2 Standard CMOS Features



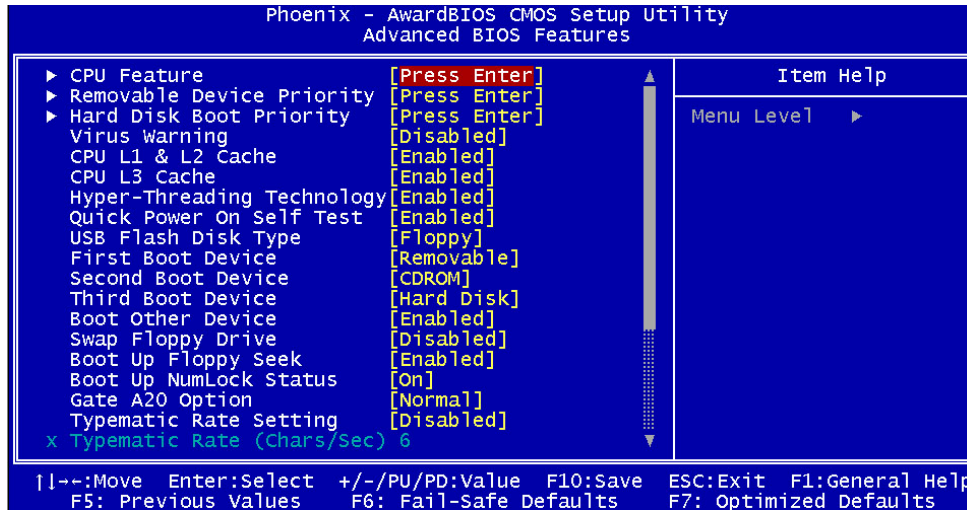
- ✧ Date (mm: dd: yyyy)
These items set up system date
- ✧ Time (hh: mm: ss)
These items set up system time
- ✧ Primary/Secondary Master/Slave

These items configure devices connected to the Primary and Secondary IDE channels. To configure an IDE hard disk drive, choose Auto. If the Auto setting fails to find a hard disk drive, set it to User, and then fill in the hard disk characteristics manually. If you have a CD-ROM drive, select the setting CD-ROM. If you have an ATAPI device with removable media, select Floptical.

- ✧ Drive A/B
- ✧ Video
- ✧ Halt On

- ✧ Base Memory
- ✧ Expanded Memory
- ✧ Total Memory

5.3 Advanced BIOS Features

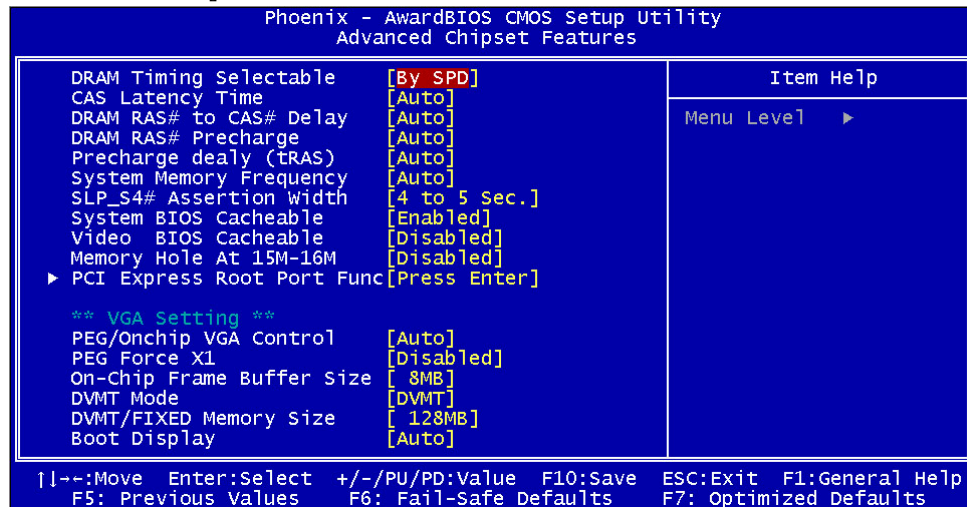


- ✧ CPU Feature Default: Press Enter
 - Delay Prior to Thermal Default: 16Min
 - Thermal Management Default: Thermal Monitor 1
 - Limit CPUID MaxVal Default: Disabled
 - C1E Function Default: Auto
 - Execute Disable Bit Default: Enabled
- ✧ Removable Device Priority Default: Press Enter
 - Floppy Disks
- ✧ Hard Disk Boot Priority Default: Press Enter
- ✧ Virus Warning Default: Disabled
- ✧ CPU L1&L2 Cache Default: Enabled
 - Leave these items enabled since all the processors that can be installed on this board have internal L2 cache memory.
 - Hyper-Threading Technology Default: Enabled
- ✧ Quick Power On Self Test Default: Enabled
- ✧ USB Flash Disk Type Default: Floppy
- ✧ First Boot Device Default: Removable
 - When system boot-strap first time detect device.
- ✧ Second Boot Device Default: CDROM
 - When system boot-strap first time detect device.
- ✧ Third Boot Device Default: Hard Disk
 - When system boot-strap first time detect device.
- ✧ Boot Other Device Default: Enabled

If you enable this item, the system will also search for other boot devices if it fails to find an operating system from the first two locations.

- ✧ Swap Floppy Drive Default: Disabled
If you have two diskette drives installed and you enable this item, drive A becomes drive B and drive B becomes drive A.
- ✧ Boot Up Floppy Seek Default: Enabled
- ✧ Boot Up NumLock Status Default: On
- ✧ Gate A20 Option Default: Normal
- ✧ Typematic Rate Setting Default: Disabled
Typematic Rate (chars/sec) Default: 6
Typematic Delay(Msec) Default: 250
- ✧ Security Option Default: Setup
- ✧ ACPI Mode Default: Enabled
- ✧ MPS Version Control For OS Default: 1.4
- ✧ OS Select For DRAM > 64MB Default: Non-OS2
- ✧ Report No FDD For WIN 95 Default: No
- ✧ Full screen Logo show Default: Enabled
- ✧ Small Logo (EPA) show Default: Enabled

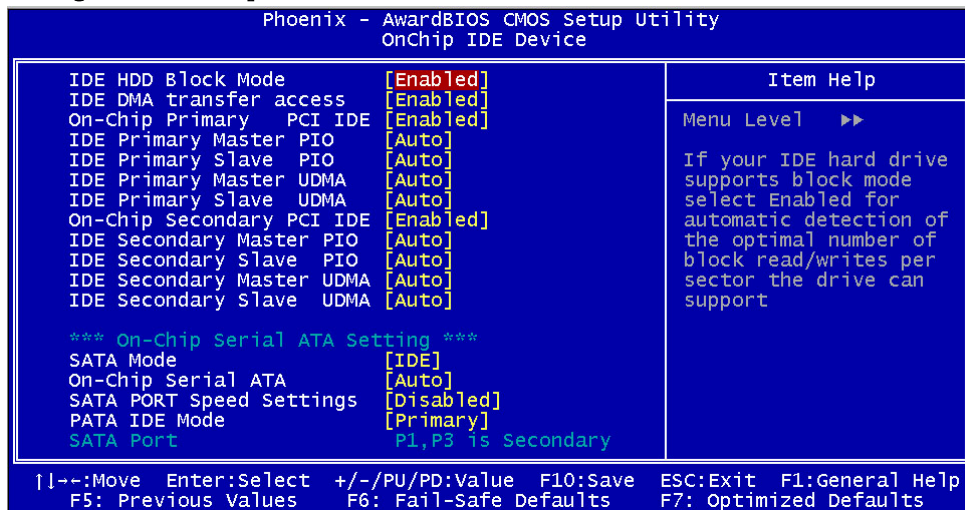
5.4 Advanced Chipset Features



- ✧ DRAM Timing Selectable Default: By SPD
- X CAS Latency Time Default: Auto
- X DRAM RAS# to CAS# Delay Default: Auto
- X DRAM RAS# Precharge Default: Auto
- X Precharge delay (tRAS) Default: Auto
- X System Memory Frequency Default: Auto
- ✧ SLP-S4# Assertion Width Default: 4 to 5 sec
- ✧ System BIOS Cacheable Default: Enabled

- ✧ Video BIOS Cacheable Default: Disabled
- ✧ Memory Hole At 15M-16M Default: Disabled
- ✧ PCI Express Root port Function Default: Press Enter
 - PCI Express port 1 Default: Auto
 - PCI Express port 2 Default: Auto
 - PCI Express port 3 Default: Auto
 - PCI Express port 4 Default: Auto
 - PCI Express port 5 Default: Auto
 - PCI Express port 6 Default: Auto
 - PCI-E Compliancy Mose Default: v1.0a
- **VGA Setting **
- ✧ PEG/Onchip VGA Control Default: Auto
- ✧ On-chip Frame Buffer Size Default: 8MB
- ✧ DVMT Mode Default: DVMT
- ✧ FIXED Memory Size Default: 128MB
- ✧ DVMT Memory Size Default: 128MB
- ✧ Boot Display Default: Auto

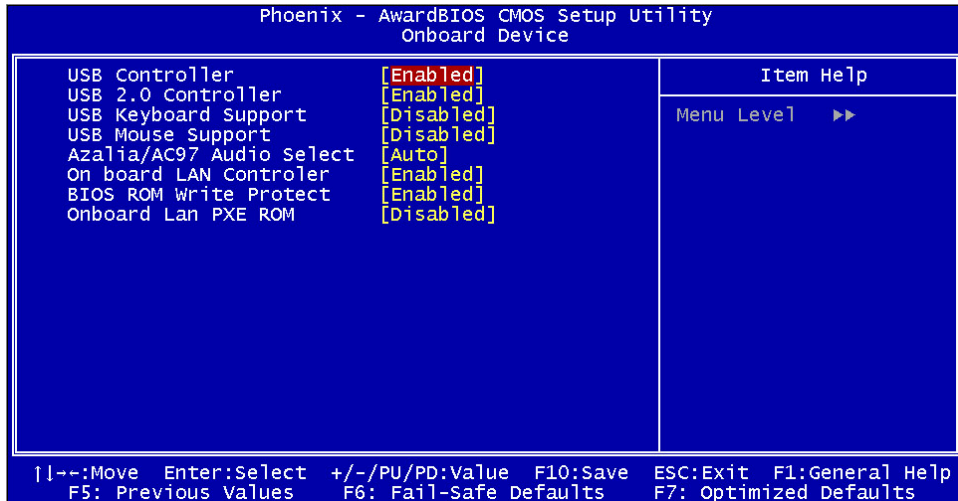
5.5 Integrated Peripherals



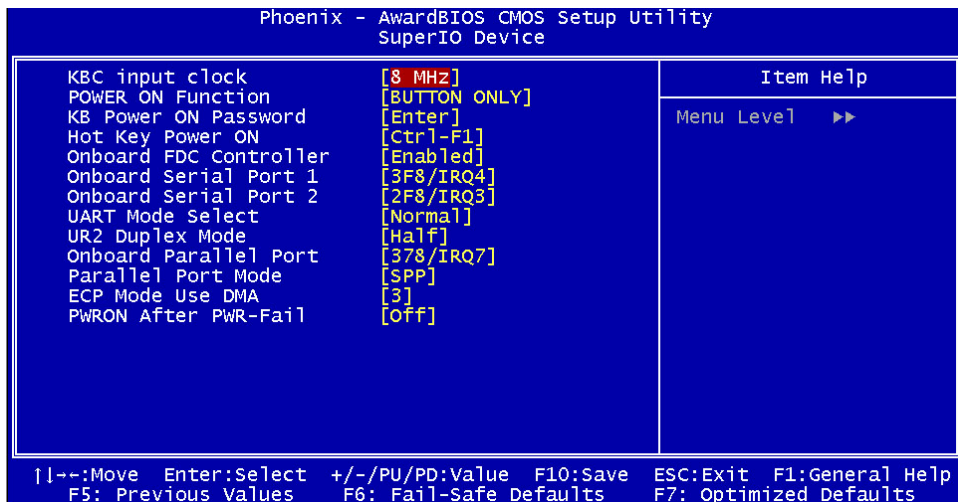
- ✧ OnChip IDE Device Default: Press Enter
- ✧ IDE HDD Block Mode Default: Enabled
- ✧ IDE DMA Transfer access Default: Enabled
- ✧ On-Chip Primary/ Secondary PCI IDE
 - Chipset inside the first/second channel of PCI IDE interface
 - Default: Enabled
- ✧ IDE Primary/Secondary Master/Slave PIO
 - The first/second IDE primary master/primary slave control PIO mode
 - Default: Auto
- ✧ IDE Primary/ Secondary Master/Slave UDMA Default: Auto

*** On-Chip Serial ATA Setting ***

- X SATA Mode Default: IDE
- ✧ On-chip serial ATA Default: Auto
- X SATA PORT Speed Settings Default: Disabled
- PATA IDE Mode Default: Primary
- SATA Port Default: p1, p3 IS Secondary



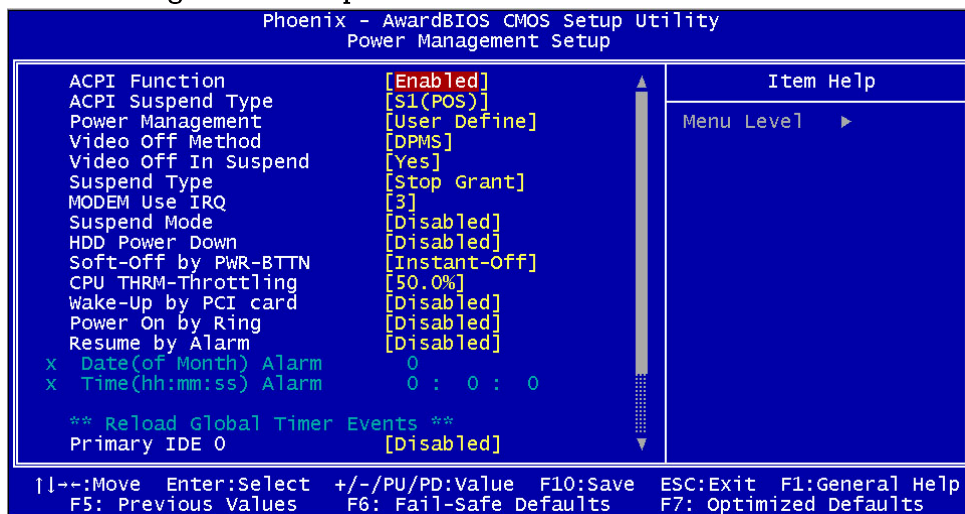
- ✧ Onboard Device Default: Press Enter
- ✧ USB Controller Default: Enabled
- ✧ USB 2.0 Controller Default: Enabled
- ✧ USB Keyboard Support Default: Disabled
- ✧ USB Mouse Support Default: Disabled
- ✧ Azalia/AC97 Audio select Default: Auto
- ✧ Onboard LAN controller Default: Enabled
- ✧ BIOS ROM Write Protect Default: Enabled
- ✧ Onboard LAN PXE ROM Default: Enabled



- ✧ Super IO Device Default: Press Enter
- ✧ KBC input clock Default: 8MHZ

- ✧ POWER ON Function Default: BUTTON ONLY
 - X KB Power ON Password Default: Enter
 - X Hot Key Power ON Default: Ctrl-F1
- ✧ Onboard FDC Controller
 - Setup onboard FDC controller Default: Enabled
- ✧ Onboard Serial Port 1/2
 - Setup onboard serial port1/2 Default: 3F8/IRQ4/2F8/IRQ4
- ✧ UART Mode Select
 - Setup UART mode select Default: Normal
- ✧ UR2 Duplex Mode Default: Half
- ✧ Onboard Parallel Port
 - Setup select parallel port Default: 378/IRQ7
- ✧ Parallel Port Mode
 - Setup parallel port mode Default: SPP
- ✧ ECP Mode USE DMA Default: 3
- ✧ PWRON After PWR-Fail Default: off

5.6 Power Management Setup



- ✧ ACPI Function
 - Setup if use ACPI function Default: Enabled
- ✧ ACPI Suspend Type Default: S1 POS
- ✧ Power Management Default: User Define
- ✧ Video off Method Default: DPMS
- ✧ Video off In Suspend Default: Yes
- ✧ Suspend Type Default: Stop Grant
- ✧ MODEM Use IRQ Default: 3
- ✧ Suspend Mode Default: Disabled
- ✧ HDD Power Down Default: Disabled
- ✧ Soft-Off by PWR-BTTN Default: Instant-Off

- ✧ Wake-up by PCI card Default: Disabled
- ✧ Power On by Ring Default: Disabled
- ✧ Resume by Alarm Default: Disabled
- ✧ Date (of Month) Alarm Default: 0
- ✧ Time (hh:mm:ss) Alarm Default: 0
- ** Reload Global Timer Events **
- ✧ Primary/ Secondary IDE 0/1 Default: Disabled
- ✧ FDD, COM, LPT Port Default: Disabled
- ✧ PCI PIRQ [A-D]# Default: Disabled

5.7 Set Supervisor Password & Set User Password

If you highlight this item and press Enter, a dialog box appears that you can enter a supervisor password. You can enter no more than six letters or numbers. Press Enter after you have typed in the password. There will be the second dialog box asking you to retype the password for confirmation. Press Enter after you have retyped it correctly. Then the password is required for the access to the setup utility or for it at start-up, depending on the setting of the password check item in advanced setup.

5.8 Save Exit & Without Save Exit Setup

Highlight this item and press Enter to save the changes that you have made in the setup utility configuration and exit the program. When the save and exit dialog box appears, press Y to save and exit, or press N to exit without saving.