

Notice to End Users

This User's Guide & Technical Reference is for assisting system manufacturers and end-users in setting up and installing the mainboard.

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SL-63AV SERIALS



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Chapter 1

Introduction

Features

CPU

1. Supports Intel **PPGA Celeron 370 CPU** and other compatible CPUs using Socket 370 at 300A ~ 533 MHz or higher
2. Supports CPU voltage auto detect circuit
3. Supports 66/100/112 MHz Bus Clock.

Chipset

1. VIA 693 chipset
2. PCI Rev 2.1, 5V, 33MHz interface compliant
3. Supports 66/68/75/83 MHz, 3.3V AGP(Accelerated Graphics Port) slot

L2 Cache

1. PPGA Celeron 370 CPU supports 128K write back cache with Pipelined Burst SRAMs

Main Memory

1. Memory range from 8MB (minimum) to 768MB (SDRAM) (maximum) with DRAM Table Free configurations
2. Supports 8/16/32/64/128/256MB SDRAM with 10ns or faster modules
3. Supports 3 PCs 168pin DIMM sockets (3.3V Unbuffered, 4 clock type)
4. DRAM supports ECC or Parity function

BIOS

1. AWARD Plug and Play BIOS
2. Supports ACPI Function
3. Flash Memory for easy upgrade

Super I/O Function

1. Integrated USB (Universal Serial Bus) controller with two USB ports.
2. Supports 2 IDE channels with 4IDE devices (including ZIP/LS-120 devices)
3. Provides PCI IDE Bus Master function and supports Ultra ATA33/66 function
4. One floppy port
5. Two high speed 16550 FIFO UART ports
6. One parallel port with EPP/ECP/SPP capabilities
7. PS/2 mouse connector
8. Built-in RTC, CMOS, keyboard controller on single I/O chip
9. Peripherals boot function (with ATX power)

Other Functions

1. AT size 22cm x 24cm
2. 4 PCI Master slots, 2 ISA slots, and 1 AGP slot
3. Supports SCSI/CD-ROM Boot function
4. Supports 66/68/75/83/100/103/105/124/133/140 MHz Bus Clock*
5. Supports Wake On Lan (WOL), modem ring up function **
6. Supports hardware monitor function (optional).

***: For 100MHz CPU environment, the SDRAM specification must be compliant with PC-100 Spec.**

****: For WOL support WOL, the ATX power supply has to have at least 5V/720mA standby current.**

Mainboard Layout with Default Settings

The default settings of the following figure is for the PPGA Celeron 370- 300A MHz with the Jumperless function Enabled.

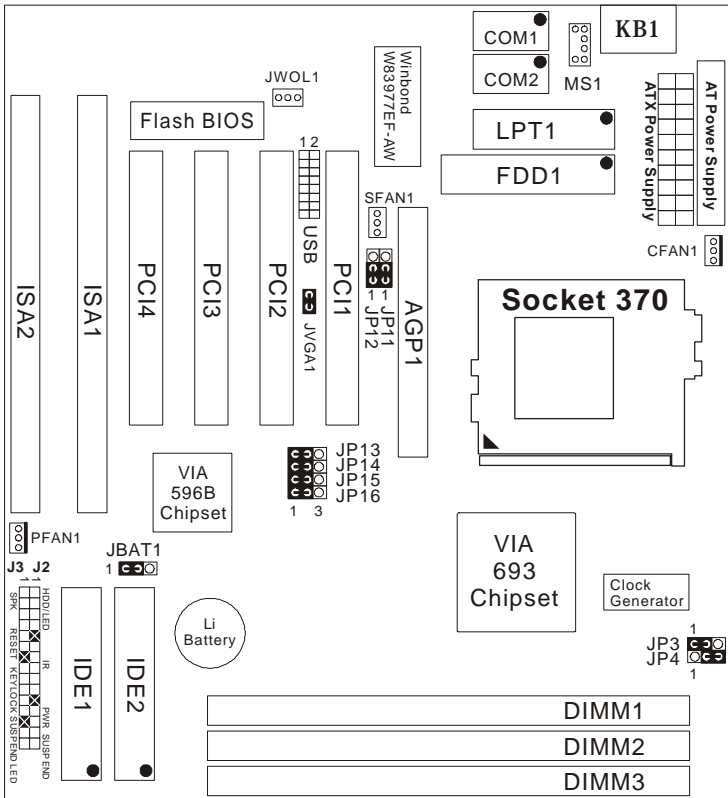


Figure 1-1. Motherboard Layout

























Chapter 2

























Hardware Setup

There are two ways to set the CPU type and both ways are controlled by JP13, JP14, JP15, and JP16:

1. Use jumpers (hardware): JP13 ~ JP16 must be set. Refer to the following pages (*CPU Type Jumper Configuration*).
2. Use BIOS (jumperless): JP13 ~ JP16 must be all closed at pin 1-2 (default). Refer to BIOS “CPU CHIPSET FEATURE SETUP” section for a detailed description.

CPU Type Jumper Configuration

<i>CPU Type</i>	<i>Bus Ratio</i>	<i>Bus Clock</i>
Celeron 300 (66MHz x 4.5X)	JP13  JP14  JP15  JP16  <small>1 3</small>	JP3  JP4  <small>1 3</small>
Celeron 333 (66MHz x 5.0X)	JP13  JP14  JP15  JP16  <small>1 3</small>	JP3  JP4  <small>1 3</small>
Celeron 366 (66MHz x 5.5X)	JP13  JP14  JP15  JP16  <small>1 3</small>	JP3  JP4  <small>1 3</small>
Celeron 400 (66MHz x 6.0X)	JP13  JP14  JP15  JP16  <small>1 3</small>	JP3  JP4  <small>1 3</small>

Celeron 433 (66MHz x 6.5X)	JP13  JP14  JP15  JP16  1 3	JP3  JP4  1 3
Celeron 466 (66MHz x 7.0X)	JP13  JP14  JP15  JP16  1 3	JP3  JP4  1 3
Celeron 500 (66MHz x 7.5X)	JP13  JP14  JP15  JP16  1 3	JP3  JP4  1 3
Celeron 533 (66MHz x 8.0X)	JP13  JP14  JP15  JP16  1 3	JP3  JP4  1 3

System Memory Configuration

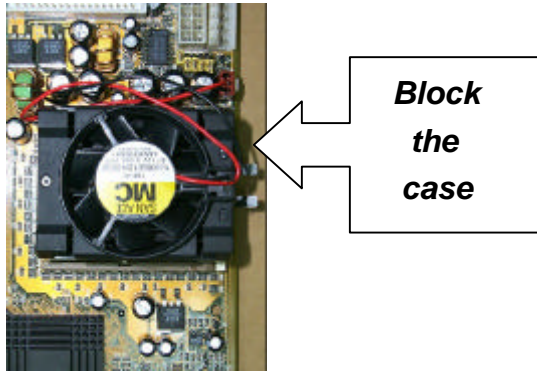
This VIA 693 motherboard supports 168 pin DIMM of 4MB, 8MB, 16MB, 32MB, 64MB, 128MB and 256MB to form a memory size between 8MB to 768MB (SDRAM). VIA 693 chipsets provide “Table- Free” function. It means that users can install DRAM with any configuration and in any bank, which is why the DRAM table is not needed, but do remember that the DRAM must be 3.3V Unbuffered and 4 clock type.

CPU Heat Sink Installation

Follow the following steps in order to install your Intel PPGA Celeron 370 properly.

Step 1:

If you use INTEL BOX TYPE Celeron 370CPU and the clip block the case then you must change the clip with the one that we send you within the mainboard



Step 2:

Remove the fan and change the clip with the one that we send you when you finish changing the clip it should be as following photo.



Step 3:

Put the fan back on the heat sink firmly



























































Jumper Settings

XFAN 1: Onboard FAN (12V) Connector

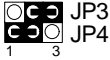


XFAN1 Function

XFAN	Function
CFAN1	CPU FAN
PFAN1	Power FAN
SFAN1	Chassis FAN

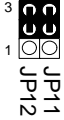

JP13 ~ JP16: Bus Ratio Select

<i>Bus Ratio</i>	<i>JP13 ~ JP16</i>	<i>Bus Ratio</i>	<i>JP13 ~ JP16</i>
2.0x	JP13  JP14  JP15  JP16  1 3	2.5x	JP13  JP14  JP15  JP16  1 3
3.0x	JP13  JP14  JP15  JP16  1 3	3.5x	JP13  JP14  JP15  JP16  1 3
4.0x	JP13  JP14  JP15  JP16  1 3	4.5x	JP13  JP14  JP15  JP16  1 3
5.0x	JP13  JP14  JP15  JP16  1 3	5.5x	JP13  JP14  JP15  JP16  1 3
6.0x	JP13  JP14  JP15  JP16  1 3	6.5x	JP13  JP14  JP15  JP16  1 3
7.0x	JP13  JP14  JP15  JP16  1 3	7.5x	JP13  JP14  JP15  JP16  1 3
8.0 x	JP13  JP14  JP15  JP16  1 3	By BIOS (jumperless setting) (default)	JP13  JP14  JP15  JP16  1 3

JP3, JP4: Bus Clock Select



Bus Clock	JP3, JP4
66MHz	
100MHz	
Auto detect 66/100MHz (default)	

JP11, JP12: USB Port Select

USB Port	JP11,JP12
Redirect USB port 1 To AGP	
Redirect USB port 1 To USB connector(default)	



JVGA1: VGA Card

This jumper is set for the PCI VGA card only. Open this jumper when the system isn't able to boot up. If you use AGP card, it is important to set default with JVGA1

	JVGA1
For Special PCI VGA Card*	
Normal (default)	

JBAT1: Clear CMOS Data

Clear the CMOS memory by shorting this jumper 2 & 3 momentarily, and then remove the cap back to 1 & 2 to retain original CMOS setting.

CMOS Data	JBAT1
Clear Data	
Retain Data (default)	

Connectors

KB1: Keyboard Connector

A 5-pin female DIN keyboard connector is located at the upper right corner of the motherboard. Plug the keyboard jack directly to this connector.

MS1:PS/2 Mouse Connector

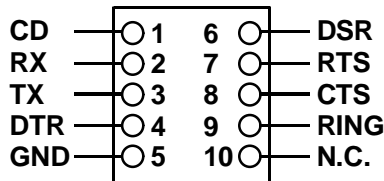
Attach PS/2 mouse cable to this 6-pin connector.

LPT:Parallel Port

The system provides a 2x13-pin parallel port connector, PRT. Attach parallel port cable to this connector.

COM1/COM2: Serial Port Connectors

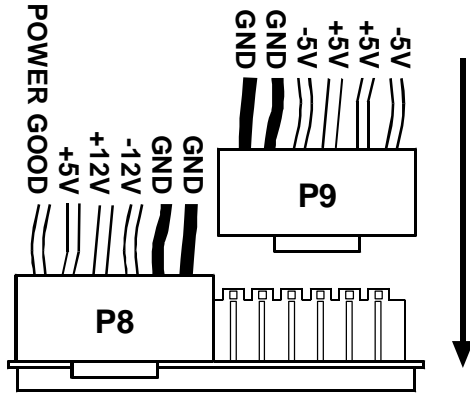
The system provides has two 2x5-pin serial port connectors, COM1 and COM2. Attach COM1/COM2 cables to these connectors.



COM1 / COM2 (Top View)

Power Connector

The power connector has two types: AT and ATX
Plug the AT dual connectors from the power directly onto the board connector while making sure the black leads are in the center.



AT POWER CONNECTOR

FDC: Floppy Drive CONNECTOR

The system board has a 2x17-pin floppy drive connector, FDC. Connect one end of a floppy drive cable to this connector and the other end to a floppy drive.

IDE1/IDE2: Primary/Secondary IDE Connectors

The system board has a 32-bit ENHANCED PCI IDE Controller that provides for HDD connectors, IDE1 (primary) and IDE2 (secondary).

IDE LED Activity Light: (J2 pin1-4)

This connector connects to the hard disk activity indicator light on the case.

Infrared Port Module Connector (J2 pin6-10)

The system board provides a 5-pin infrared connector-R1 for an optional wireless transmitting and receiving module. Pin 6 through 10 are Transmit, GND, Receive (low speed), Receive (high speed), and Vcc, respectively.

PWR Switch (J2 pin12, 13)

Power Switch: Toggle this pin to turn the power supply on/off (for ATX power only).

SMI Switch (J2 pin14, 15)

Toggle this jumper forces the system to sleep. The system won't wake up until the hardware event is coming. (The BIOS Power Management setting must be Enabled.)

Speaker Connector (J3 pin1-4)

The speaker connector is a 4-pin connector for connecting the system to the case. (See the following drawing for jumper position.)

Reset Switch (J3 pin5, 6)

The system board has a 2-pin connector for rebooting your computer without having to turn off your power switch. This prolongs the life of the system's power supply.

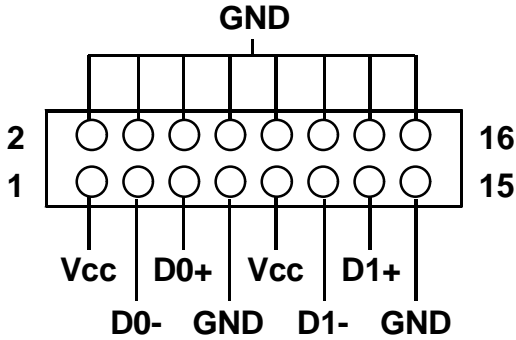
JWOL1: Wake On Lan (WOL) Connector

This connector is designed to use Lan to boot up the system. Connect the wake on signal from the Lan card to this connector.

Power LED and Keylock Switch (J3 pin8-12)

The keylock switch is a 5-pin connector for locking the keyboard for security purposes. (See the following drawing for jumper position, and pin8~10 is connected to the power LED and pin 11~12 is connected to the keylock switch.)

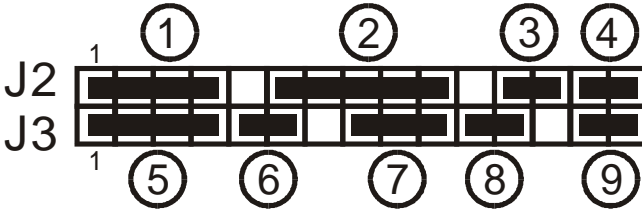
USB1: USB Connector



Turbo LED (J2 pin14, 15)

Connect the case's turbo LED to this connector.

J2 and J3



- ① : HDD LED
- ③ : POWER SWITCH
- ⑤ : SPEAKER
- ⑦ : POWER LED
- ⑨ : TURBO LED

- ② : INFRARED (IR)
- ④ : SMI
- ⑥ : RESET SWITCH
- ⑧ : KEYLOCK

J2 Switch Signal Summary

J2	Pin	Signal Description
HDD LED Connector	1	+5V
	2	HDD LED Signal
	3	HDD LED Signal
	4	+5V
N.C.	5	No Connection
Infrared Connector	6	Infrared Transmit Signal
	7	GND
	8	Infrared Receive Signal (low speed)
	9	Infrared Receive Signal (high speed)
	10	+5V
N.C.	11	No Connection
PWR	12	5V Standby
	13	Power Switch(for ATX Power)
SMI	14	SMI Signal
	15	GND

J3 Switch Signal Summary

J3	Pin	Signal Description
Speaker Connector	1	Speaker Signal
	2	No Connection
	3	GND
	4	+5V
Reset Switch	5	Reset Signal
	6	GND
N.C.	7	No Connection
Power LED Connector	8	+5V
	9	No Connection
	10	GND
Keylock Connector	11	Keylock Signal
	12	GND
N.C.	13	No Connection
Turbo LED Connector	14	Turbo LED Connector
	15	GND

Chapter 3

AWARD BIOS SETUP

This 693 Apollo Pro-Plus motherboard comes with the AWARD BIOS from AWARD Software Inc. Enter the Award BIOS program Main Menu by:

1. Turn on or reboot the system. After a series of diagnostic checks, the following message will appear:

PRESS TO ENTER SETUP

2. Press the key and the main program screen will appear as follows.

ROM PCI/ISA BIOS(2A6LGSNC)
CMOS SETUP UTILITY
AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	CPU SPEED SETTING
BIOS FEATURES SETUP	INTEGRATED PERIPHERALS
CHIPSET FEATURES SETUP	SUPERVISOR PASSWORD
POWER MANAGEMENT SETUP	USER PASSWORD
PNP/PCI CONFIGURATION	IDE HDD AUTO DETECTION
LOAD SETUP DEFAULTS	SAVE & EXIT SETUP
	EXIT WITHOUT SAVING
Esc : Quit	i ϕ ϕ \ddagger \ddot{O} :Select Item
F10 : Save & Exit Setup	(Shift) F2 : Change Color
Time, Date, Hard Disk Type...	

3. Using the arrows on your keyboard, select an option, and press <Enter>. Modify the system parameters to reflect the options installed in your system.
4. You may return to the Main Menu anytime by pressing <ESC> .
5. In the Main Menu, “SAVE AND EXIT SETUP” saves your changes and reboots the system, and “EXIT WITHOUT SAVING” ignores your changes and exits the program.

Standard CMOS Setup

Standard CMOS Setup allows you to record some basic system hardware configuration and set the system clock and error handling. You only need to modify the configuration values of this option when you change your system hardware configuration or the configuration stored in the CMOS memory gets lost or damaged.

Run the Standard CMOS Setup as follows:

1. Choose “STANDARD CMOS SETUP” from the Main Menu and a screen with a list of options will appear.

ROM PCI/ISA BIOS STANDARD CMOS SETUP AWARD SOFTWARE, INC.							
Date (mm:dd:yy) : Thu, May 9 1996							
Time (hh:mm:ss) : 15 : 45 : 10							
HARD DISKS	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR MODE
Primary Master	: Auto	0	0	0	0	0	0 Auto
Primary Slave	: Auto	0	0	0	0	0	0 Auto
Secondary Master	: Auto	0	0	0	0	0	0 Auto
Secondary Slave	: Auto	0	0	0	0	0	0 Auto
Drive A: 1.44M, 3.5 in.							
Drive B: None							
						Base Memory:	640K
						Extended Memory:	15360K
						Other Memory:	384K
						Total Memory: 16384K	
Video : EGA/VGA							
Halt On : All Errors							
Esc : Quit		↑ ↓ → ← ; Select Item			PU/PD/+/- : Modify		
F1 : Help		(Shift) F2 : Change Color					

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys.

A short description of the screen options is as follows:

Date (mm:dd:yy)	Set the current date and time.
Time (hh:mm:ss)	
Primary (Secondary)	This field records the specifications for all non-SCSI hard disk drives installed in your system. Refer to the respective documentation on how to install the drives.
Master/Slave	
Drive A/B	Set this field to the type(s) of floppy disk drive(s) installed in your system. The choices are: 360KB, 5.25 in., 1.2MB, 5.25 in., 720KB, 3.5 in., 1.44M, 3.5 in. (default), 2.88MB, 3.5 in., or None
Video	Set this field to the type of video display card installed in the system. The choices are: Monochrome; Color 40x25; VGA/EGA (default); or Color 80x25
Halt On	Set this warning feature for the type of errors that will cause the system to halt. The choices are: All Errors (default); No Errors; All, But Keyboard; All, But Diskette; or All, But Disk/Key

3. Press <ESC> to return to the Main Menu when you finish setting up the “Standard CMOS Setup”

BIOS Features Setup

BIOS Features Setup allows you to improve your system performance or set up system features according to your preference.

Run the BIOS Features Setup as follows:

1. Choose “BIOS FEATURES SETUP” from the Main Menu and a screen with a list of options will appear.

ROM PCI/ISA BIOS BIOS FEATURES SETUP AWARD SOFTWARE, INC.			
Virus Warning	: Disabled	Video BIOS Shadow	: Enabled
CPU Internal Cache	: Enabled	C8000-CBFFF Shadow	: Disabled
External Cache	: Enabled	CC000-CFFFF Shadow	: Disabled
CPU L2 Cache ECC Checking	: Enabled	D0000-D3FFF Shadow	: Disabled
Quick Power on Self Test	: Enabled	D4000-D7FFF Shadow	: Disabled
Boot Sequence	: A,C,SCSI	D8000-DBFFF Shadow	: Disabled
Swap Floppy Drive	: Disabled	DC000-DFFFF Shadow	: Disabled
Boot Up Floppy Seek	: Disabled		
Boot Up NumLock Status	: On		
IDE HDD Block MODE	: Enabled		
Gate A20 Option	: Fast		
Memory Parity/ECC Check	: Disabled	ESC :Quit	⏪ ⏩ ⏴ ⏵ Select Item
Typematic Rate Setting	: Disabled	F1 :Help	PU/PD/+/-: Modify
Typematic Rate (Chars/Sec)	: 6	F5 :Old Values(Shift)	F2 : Color
Typematic Delay (Msec)	: 250	F6 :Load BIOS Defaults	
Security Option	: Setup	F7 :Load Setup Defaults	
PCI/VGA Palette Snoop	: Disabled		
OS Select for DRAMs>64MB	: Non-OS/2		
Report No FDD For WIN 95	: No		

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys. An explanation of the <F> keys follows:

<F1>: “Help” gives options available for each item.

Shift <F2>: Change color.

<F5>: Get the previous values. These values are the values with which the user started in the current session.

<F6>: Load all options with the BIOS default values.

<F7>: Load all options with the Setup default values.

A short description of screen options follows:

- Virus Warning** Enabled: Activates automatically when the system boots up causing a warning message to appear if there is anything attempting to access the boot sector or hard disk partition table.
Disabled: No warning message will appear when there is something attempting to access the boot sector or hard disk partition table
- Note: Many diagnostic (or boot manager) programs which attempt to access the boot sector table can cause the above warning message. If you will be running such a program, we recommend that you disable the virus protection first.***
- CPU Internal Cache** Choose Enabled (default) or Disabled. This option allows you to enable or disable the CPU's internal cache.
- External Cache** Choose Enabled (default) or Disabled. This option allows you to enable or disable the external cache memory.
- Quick Power On Self Test** Choose Enabled (default) or Disabled. This option allows you to speed up the Power-On Self-Test routine.

Boot Sequence	Default is “A, C, SCSI” This option determines which drive to look at first for an operating system.
Swap Floppy Drive	Choose Enabled or Disabled (default). This option swaps floppy drive assignments when it is enabled.
Boot Up Floppy Seek	Enabled (default): During POST, BIOS checks the track number of the floppy disk drive to see whether it is 40 or 80 tracks. Disabled: During POST, BIOS will not check the track number of the floppy disk drive.
Boot Up NumLock Status	Choose On (default) or Off. This option lets user activate the NumLock function at boot-up.
IDE HDD Block Mode	Choose Enabled (default) or Disabled. If your hard disk size is larger than 540MB, choose Enabled, and, if you are using the IDE HDD Auto Detection option, the BIOS will choose this option automatically. <i>Note: Some older model HDDs don't provide this feature.</i>
Gate A20 Option	Choose Normal or Fast (default). This option allows the RAM to access the memory above 1MB by using the fast gate A20 line.
Memory Parity /ECC Check	Choose Enabled or Disabled

Typematic Rate Setting	Choose Enabled or Disabled (default). Enable this option to adjust the keystroke repeat rate.
Typematic Rate (Chars/Sec)	Range between 6 (default) and 30 characters per second. This option controls the speed of repeating keystrokes.
Typematic Delay (Msec)	Choose 250 (default), 500, 750, and 1000. This option sets the time interval for displaying the first and the second characters.
Security Option	Choose System or Setup (default). This option prevents unauthorized system boot-up or use of BIOS Setup.
PCI/VGA palette Snoop	Choose Enabled or Disabled (default). It determines whether or not the MPEG ISA cards can work with PCI/VGA.
OS Select for DRAM > 64MB	Non-OS2 (default): For Non-OS/2 system. OS: For OS/2 system.
Report No FDD For WIN95	Yes: BIOS reports "NO FDD" to Win95. No (default): BIOS will not report "NO FDD" to Win95.
Video BIOS Shadow	Enabled (default): Map the VGA BIOS to system RAM. Disabled: Will not map the VGA BIOS to system RAM.

C8000-CBFFF to DC000-DFFF These options are used to shadow other expansion card ROMs.
Shadow

3. Press <ESC> and follow the screen instructions to save or disregard your settings.

Chipset Features Setup

Chipset Features Setup changes the values of the chipset registers. These registers control the system options.

Run the Chipset Features Setup as follows:

1. Choose “CHIPSET FEATURES SETUP” from the Main Menu and a screen with a list of options will appear.

ROM PCI/ISA BIOS(2A6LGSNC)
CHIPSET FEATURES SETUP
AWARD SOFTWARE, INC.

Bank 0/1 DRAM Timing	: SDRAM 10ns	CPU Host Clock(CPU/PCI):Default
Bank 2/3 DRAM Timing	: SDRAM 10ns	
Bank 4/5 DRAM Timing	: SDRAM 10ns	
SDRAM Cycle Length	: 3	
DRAM Clock	: Host CLk	
Memory Hole	: Disabled	
Read Around write	: Disabled	
Concurrent PCI/Host	: Disabled	
System BIOS Cacheable	: Disabled	
Video RAM Cacheable	: Disabled	
AGP Aperture Size	: 64M	
AGP-2X Mode	: Enabled	
OnChip USB	: Enabled	
USB Keyboard Support	: Disabled	ESC: Quit ↑ ↓ → ←: Select Item
OnChip Sound	: Enabled	F1 : Help PU/PD/+/-: Modify
OnChip Modem	: Disabled	F5 : Old Values (Shift)F2 : Color
		F6 : Load BIOS Defaults
		F7 : Load Setup Defaults

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys.

A short description of screen options follows:

**Bank 0/1 2/3 4/5
DRAM Timing**

This item allows you to select the value in this field, depending on whether the board has paged DRAMs or EDO (extended data output) DRAMs. The Choice: EDO 50ns, EDO 60ns, Slow, Medium, Fast, Turbo.

**SDRAM Cycle
Length Time**

You can select CAS latency time in HCLKs of 2/2 or 3/3. The system board designer should have set the values in this field, depending on the DRAM installed. Do not change the values in this field unless you change specifications of the installed DRAM or the installed CPU.

Memory Hole

Choose Enabled or Disabled(default). In order to improve performance, certain space in memory can be reserved for ISA cards. This memory must be mapped into the memory's space below 16MB.

Read Around Write

DRAM optimization feature: If a memory read is addressed to a location whose latest write is being held in a buffer before being written to memory, the read is satisfied through the buffer contents, and the read is not sent to the DRAM
The Choice: Enabled, Disabled.

Concurrent PCI/HOST	When disabled, CPU bus will be occupied during the entire PCI operation period. The Choice: Enabled, Disabled
System BIOS Cacheable	Choose Enabled or Disabled (default). When Enabled, the access to the system BIOS ROM addressed at F0000H-FFFFFH is cached.
Video RAM Cacheable	Choose Enabled or Disabled (default). When Enabled, the access to the VGA RAM addressed is cached.
AGP Aperture Size (MB)	Choose 4 , 8, 16, 32, 64 (default), 128, or 256 MB. Memory mapped and graphics data structures can reside in a Graphics Aperture. This area is like a linear buffer. BIOS will automatically report the starting address of this buffer to the O.S.
AGP-2X Mode	this item allows you to enable / disable the AGP-2X (Clock 133MHz) Mode.
OnChip USB	This should be enabled if your system has a USB installed on the system board and you wish to use it. Even when so equipped, if you add a higher performance controller, you will need to disable this feature. The choice: Enabled, Disabled.

USB Keyboard Support

Enabled: Enables function when the USB keyboard is being used.
Disabled: (default) When the AT keyboard is being used.

OnChip Sound

Enabled (default): Turn on AC97 chip Controller
Disabled: Turn off AC97 chip controller or User can external add-on sound card

OnChip Modem

Enabled : Turn on MC99 feature
Disabled (default): Disabled AC97 chip controller or User can external add-on modem

CPU Host Clock (CPU/PCI)

Choose 66/33,75/37,83/41MHz, 100/33,103/34,105/35,110/36,115/38, 124/31,133/33,140/35,112/37, 140/35MHz,124/41,or 133/44MHz

3. Press <ESC> and follow the screen instructions to save or disregard your settings.

Power Management Setup

Power Management Setup sets the system's power saving functions.

1. Choose "POWER MANAGEMENT SETUP" from the Main Menu and a screen with a list of options will appear.

ROM PCI/ISA BIOS(2A6LGSNC)
POWER MANAGEMENT SETUP
AWARD SOFTWARE, INC.

ACPI Function	:Disabled	Primary INTR	: ON
Power Management	:User Define	IRQ3 (COM2)	: Primary
PM Control by APM	:Yes	IRQ4 (COM1)	: Primary
Video Off After	:Suspend	IRQ5 (LPT2)	: Primary
Video Off Method	:V/H SYNC+Blank	IRQ6 (Floppy Disk)	: Primary
Modem Use IRQ	:3	IRQ7 (LPT 1)	: Primary
Soft-Off by PWRBTN	:Instant-Off	IRQ8 (RTC Alarm)	: Disabled
HDD Power Down	:Disabled	IRQ9 (IRQ2 Redir)	: Secondary
Doze Mode	:Disabled	IRQ10 (Reserved)	: Secondary
Suspend Mode	:Disabled	IRQ11 (Reserved)	: Secondary
PM Events		IRQ12 (RS/2 Mouse)	: Primary
VGA	:OFF	IRQ13 (Coprocessor)	: Primary
LPT&COM	:LPT/COM	IRQ14 (Hard Disk)	: Primary
HDD&FDD	:ON	IRQ15 (Reserved)	: Disabled
DMA/master	:OFF	ESC : Quit	↑ ↓ → ← : Select Item
Modem Ring Resume	:Disabled	F1 : Help	PU/PD/+/- : Modify
RTC Alarm Resume	:Enabled	F5 : Old Values (Shift)	F2 : Color
Date(of Month)	: 0	F6 : Load BIOS Defaults	
Timer(hh:mm:ss)	: 0: 0: 0	F7 : Load Setup Defaults	

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys.

A short description of screen options follows:

ACPI Function Enabled: Turn on ACPI Function
Disabled(default):Turn off ACPI Function

Power Management Choose Max. Saving, User Define (default), Disabled, or Min. Saving.

PM Control by APM Choose Yes (default) or No. You need to choose Yes when the operating system has the APM functions, otherwise choose No.

Video Off Method Choose Blank , DPMS, or V/H Sync+Blank (default). You can choose either DPMS or V/H Sync+Blank when the monitor has the Green function. You need to choose Blank when the monitor has neither the Green function.

Video Off After Choose NA, Suspend, Standby (default), or Doze.

MODEM Use IRQ Assign the IRQ number to the modem which is being used so that the ring signal can wakeup the system. The default setting is 3 (COM2).

Soft-Off by PWR-BTTN Instant-off: (default) turns off the system power at once after pushing the power button.
Delay 4 Sec: turns off the system

power 4 seconds after pushing the power button (to meet PC97/98 spec.)

Doze Mode

This mode sets the CPU speed down to 33MHz.

**Standby Mode
Suspend Mode**

These two options allow you to choose the mode for the different timers. The Standby Mode turns off the VGA monitor, and the Suspend Mode turns off the CPU and saves the energy of the system.

HDD Power Down

Time is adjustable from 1 to 15 minutes. When the set time has elapsed, the BIOS sends a command to the HDD to power down, which turns off the motor.

**Modem Ring
Resume**

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

**RTC Alarm
Resume
Wake On LAN**

Enabled: Wake up the system from the LAN card (LAN Card must support Wake Up On LAN function and the power supply must provide at least 5V/750mA standby current)

IRQ (#), NMI;	Enabled: (default) The system can not enter the power saving mode when I/O ports or IRQ # is activated
Primary IDE 0	
Primary IDE 1;	
Secondary IDE 0	
Secondary IDE 1;	Disabled: The system still can enter the power saving mode when I/O ports or IRQ# is activated.
Floppy Disk;	
Serial Port;	
Parallel Port	

Note: These functions can only be activated when the power management option is Enabled

3. Press <ESC> and follow the screen instructions to save or disregard your settings.

PnP/PCI Configuration Setup

PnP/PCI Configuration Setup configures the PCI bus slots.

Run the Chipset Features Setup as follows:

1. Choose “PnP/PCI CONFIGURATION SETUP” from the Main Menu and a screen with a list of options will appear.

ROM PCI/ISA BIOS(2A6LGSNC)
 PNP/PCI CONFIGURATION
 AWARD SOFTWARE, INC.

PNP OS Installed	: No	CPU to PCI Write Buffer	: Enabled
Resources Controlled By	: Auto	PCI Dynamic Bursting	: Enabled
Reset Configuration Data	: Disabled	PCI Master 0 WS Write	: Enabled
IRQ-3 assigned to	: PCI/ISA PnP	PCI Delay Transaction	: Enabled
IRQ-4 assigned to	: PCI/ISA PnP	PCI#2 Access #1 Retry	: Disabled
IRQ-5 assigned to	: PCI/ISA PnP	AGP Master 1 WS Write	: Enabled
IRQ-7 assigned to	: PCI/ISA PnP	AGP Master 1 WS Read	: Disabled
IRQ-9 assigned to	: PCI/ISA PnP	PCI IRQ Activated By	: Level
IRQ-10 assigned to	: PCI/ISA PnP	Assign IRQ For USB	: Enabled
IRQ-11 assigned to	: PCI/ISA PnP	Assign IRQ For VGA	: Enabled
IRQ-12 assigned to	: PCI/ISA PnP		
IRQ-14 assigned to	: PCI/ISA PnP		
IRQ-15 assigned to	: PCI/ISA PnP		
DMA-0 assigned to	: PCI/ISA PnP	ESC : Quit	; ↑ ↓ ← → Select Item
DMA-1 assigned to	: PCI/ISA PnP	F1 : Help	PU/PD/+/- : Modify
DMA-3 assigned to	: PCI/ISA PnP	F5 : Old Values (Shift)	F2 : Color
DMA-5 assigned to	: PCI/ISA PnP	F6 : Load BIOS Defaults	
DMA-6 assigned to	: PCI/ISA PnP	F7 : Load Setup Defaults	
DMA-7 assigned to	: PCI/ISA PnP		

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys.

A short description of screen options follows:

PNP OS Installed Yes: OS supports Plug and Play function.
No (default): OS doesn't support Plug and Play function.

Note: BIOS will automatically disable all PnP resources except the boot device card when you select Yes on Non-PnP OS.

Resources Controlled By Choose Manual (default) or Auto.
The BIOS checks the IRQ/DMA channel number on the ISA and PCI card manually if you choose Manual and the IRQ/DMA channel number will be checked automatically if you choose Auto.

Reset Configuration Data Choose Enabled or Disabled (default). Disabled retains PnP configuration data in BIOS and Enabled resets the PnP configuration data in the BIOS.

IRQ-x assigned to DMA-x assigned to Legacy ISA: Manually assigns IRQ/DMA to device.
PCI/ISA PnP: BIOS assigns IRQ/DMA to device automatically.

Assign IRQ for USB Choose Enabled (default) or Disabled.
Enabled: Add one IRQ to USB controller.
Disabled: Remove IRQ from USB controller. The system will have extra IRQ for

other devices but the
USB controller will still
not be disabled (only IRQ
was removed.)

**Assign IRQ for
VGA**

Choose Enabled (default) or
Disabled.

Enabled: Add one IRQ to VGA
controller.

Disabled: Remove IRQ from VGA
controller. The system will have
extra IRQ for other devices but the
VGA controller will still not be
disabled (only IRQ will be removed.)

3. Press <ESC> and follow the screen instructions to save
or disregard your settings.

Load Setup Defaults

Load Setup Defaults option loads the default system values to the system configuration fields. If the CMOS is corrupted the defaults are loaded automatically.

Choose this option and the following message will appear:

```
"Load Setup Defaults (Y/N)? N"
```

To use the Setup defaults, change the prompt to "Y" and press <Enter>.

CPU SPEED SETTING

ROM PCI/ISA BIOS(2A6LGSNC)
PNP/PCI CONFIGURATION
AWARD SOFTWARE, INC.

Current cpu Temp. :33 C / 91 F Current System Temp. :26 C / 78 F Current CPUFAN1 Speed : 3810 RPM Current CPUFAN2 Speed : 0 RPM Vcore: 1.96V 2.5V : 2.46 V 3.3V: 3.36V 5V : 5.02 V 12V: 12.00V	ESC : Quit Select Item F1 : Help PU/PD/+/- : Modify F5 : Old Values (Shift) F2 : Color F6 : Load BIOS Defaults F7 : Load Setup Defaults
--	---

Press <ESC> and follow the screen instructions to save or disregard your settings.

Integrated Peripherals

Integrated Peripherals option changes the values of the chipset registers. These registers control system options in the computer.

1. Choose “INTEGRATED PERIPHERALS” from the Main Menu and a screen with a list of options will appear.

ROM PCI/ISA BIOS(2A6LGSNC)
INTEGRATED PERIPHERALS
AWARD SOFTWARE, INC.

OnChip IDE Channel0	: Enabled	Onboard Parallel Mode	: ECP/EPP
OnChip IDE Channel1	: Enabled	ECP Mode Use DMA	: 3
IDE Primary Mode PIO	: Enabled	Parallel Port EPP Type	: EPP1.7
Primary Master PIO	: Auto	Onboard Legacy Audio	: Enabled
Secondary Master PIO	: Auto	Sound Blaster	: Enabled
Secondary Slave PIO	: Auto	SB I/O Base Address	: 220H
Primary Master UDMA	: Auto	SB IRQ Select	: IRQ 5
Primary Slave UDMA	: Auto	SB DMA Select	: DMA 1
Secondary Master UDMA	: Auto	MPU-401	: Disabled
Secondary Slave UDMA	: Auto	MPU-401 I/O Address	: 330-333H
Init Display First	: PCI Slot	FM Port (388-38BH)	: Disabled
Onboard FDC Controller	: Enabled	Game Port (200-207H)	: Enabled
Onboard Serial Port 1	: 3F8/IRQ4		
Onboard Serial Port 2	: 2F8/IRQ3		
UART 2 Mode	: HPSIR		
IR Function Duplex	: Half	ESC : Quit	i o p f o Select Item
TX,RX, inverting enable	: NO,NO	F1 : Help	PU/PD/+/- : Modify
Onboard Parallel Port	: 378/IRQ7	F5 : Old Values (Shift)F2: Color	
		F6 : Load BIOS Defaults	
		F7 : Load Setup Defaults	

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys.

A short description of screen options is as follows:

IDE Primary Master/Slave PIO IDE Secondary Master/Slave PIO Choose Auto (default) or Mode 0~4. The BIOS will detect the HDD Mode type automatically when you choose Auto. You need to set to a lower mode than Auto when your hard disk becomes unstable.

On-Chip Primary/Secondary PCI IDE Enabled: (default) Turn on the onboard IDE function.
Disabled: Turn off the onboard IDE function.

Onboard FDC Controller Choose Enabled (default) or Disabled. Choose Disabled when you use an ISA card with FDD function, or , choose Enabled to use the onboard FDD connector.

Onboard Serial Port 1 Choose Auto (default), 3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3, or Disabled. Do not set port 1 & 2 to the same value, except when setting at Disabled.

Onboard Serial Port 2 Choose Auto (default), 3F8/IRQ4 , 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3, or Disabled.

UART 2 Mode Choose Standard (default), HPSIR, or ASKIR.

IR Function Duplex	Choose Half or Full
Onboard Parallel Port	Choose the printer I/O address: 378H/IRQ7 (default), 3BCH/IRQ7, 278H/IRQ5, Disabled
Onboard Parallel Mode	Choose Normal (default), ECP/EPP EPP, or ECP mode. The mode depends on the external device connected to this port.
ECP Mode Use DMA	Choose DMA3 (default) or DMA1. Most sound cards use DMA1. Check with your sound card configuration to make sure that there is no conflict with this function. <i>*: This option will not be displayed unless the EPP/ECP function is selected..</i>
Parallel Port EPP Type	Choose EPP1.7 (default) or EPP1.9. EPP1.9 supports hardware handshake. This setting is dependent upon your EPP device. <i>Note: The above 2 options will not be displayed unless the EPP/ECP function is selected.</i>

3. Press <ESC> and follow the screen instructions to save or disregard your settings.

Supervisor/User Password

These two options allow you to set your system passwords. Normally, the supervisor has a higher ability to change the CMOS setup option than the user. The way to set up the passwords for both Supervisor and User are as follows:

1. Choose “Change Password” in the Main Menu and press <Enter>. The following message appears:

"Enter Password:"

2. The first time you run this option, enter your password up to 8 characters and press <Enter>. The screen does not display the entered characters.
3. After you enter the password, the following message appears prompting you to confirm the password:

"Confirm Password:"

4. Enter the same password “exactly” as you just typed again to confirm the password and press <Enter>.
5. Move the cursor to Save & Exit Setup to save the password.
6. If you need to delete the password you entered before, choose the Supervisor Password and press <Enter>. It will delete the password that you had before.
7. Move the cursor to Save & Exit Setup to save the option

you did, otherwise the old password will still be there the next time you turn your machine on.

8. Press <ESC> to exit to the Main Menu.

Note: If you forget or lose the password, the only way to access the system is to clear the CMOS RAM by setting JBAT1. All setup information will be lost and you need to run the BIOS setup program again.

IDE HDD Auto Detection

IDE HDD Auto Detection detects the parameters of an IDE hard disk drive and automatically enters them to the Standard CMOS Setup screen.

The screen will ask you to select a specific hard disk for Primary Master after you select this option. If you accept a hard disk detected by the BIOS, you can enter “Y” to confirm and then press <Enter> to check next hard disk. This function allows you to check four hard disks and you may press the <ESC> after the <Enter> to skip this function and go back to the Main Menu.

Save & Exit Setup

Save & Exit Setup allows you to save all modifications you have specified into the CMOS memory. Highlight this option on the Main Menu and the following message appears:

```
SAVE to CMOS and EXIT (Y/N)? Y
```

Press <Enter> key to save the configuration changes.

Exit Without Saving

Exit Without Saving allows you to exit the Setup utility without saving the modifications that you have specified. Highlight this option on the Main Menu and the following message appears:

```
Quit Without Saving (Y/N)? N
```

You may change the prompt to “Y” and press the <Enter> key to leave this option.

Appendix 1---Driver Installation

Flash Memory Update Installation

1. Download BIOS files and flash utility from your board vendor. They are: awdf flash.exe and .bin file.
2. Copy them to bootable diskette and boot from diskette.
3. The diskette does not include memory manager e.g. emm386.exe,qemm and himem.sys
4. Type "awdf flash filename(XXXX.bin)".
5. Next screen will ask you save current bios to file or not? Depend on your diskette capacity, choose Y or N for this option.
6. Then screen asks you programming the flash memory now? type Y for this option.
7. Programming finish, utility will ask you reboot system.
8. Reset system and press DEL key enter bios setup screen.
9. Select LOAD SETUP DEFAULTS, press ENTER, press Y, press F10,press Y
10. Finish update procedure.

VIA Patch Code Installation

Windows95/Windows98:

1. Go to the CD-ROM disk, we suggest the CD-ROM title is D:\.
2. Find and run D:\Patch\Via\patch9x\Setup.exe
3. Select "Install VIA Chipset Functions' Registry", then it will automatically install this program.

Note! This program should be installed before any other VIA's drivers.

VIA AGP VxD Driver for Windows 9x Installation

Windows95/Windows98:

1. Go to the CD-ROM disk, we suggest the CD-ROM title is D:\.
2. Find and run D:\Driver\Via\Agp\Setup\Setup.exe
3. Select "Install VIA AGP VxD in turbo mode" or "Install VIA AGP VxD normal mode", then it will automatically install this program.

VIA PCI IRQ Routing Miniport for Windows 9x Installation

Windows95/Windows98:

1. Go to the CD-ROM disk, we suggest the CD-ROM title is D:\.
2. Find and run D:\Patch\Via\Virq9x\Setup.exe

Note: Before install Windows98, user must enable two functions for this miniport driver in the BIOS menu, one is “OnChip USB” in the “Chipset Features Setup” and another is “Assign IRQ for USB” in the “PNP/PCI Configuration Setup”.