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-65FV+

VIA APOLLO PRO133 SOCKET-370

FEATURE

■PROCESSOR

- Supports Intel PPGA Celeron 370 CPUs 300 ~ 533MHz or higher.
- Supports Intel FC-PGA Pentium III (Coppermine) CPUs 500E ~ 750 MHz or higher.
- Supports Cyrix Joshua CPUs.
- Supports 66/ 75*/ 83*/ 100/ 103*/ 112*/ 124*/ 133*/ 140*/
- 150*MHz system bus speeds.
  Clock multipliers up to 8x.

■CHIPSET

- VIA APOLLO PRO133 VT82C693A chipset.

■SYSTEM MEMORY

- 3x 3.3V DIMM sockets.
- 8MB to 768MB DRAM size.

■SLOT

- 1x AGP slot supports 1x / 2x mode bus; 4x PCI Bus Master slots; 2x ISA slots.

■ONBOARD I/O

- 2x Ultra ATA33/66 Bus Master IDE ports.
- 2x USB ports.
- 1x PS/2 mouse connector and 1x PS/2 keyboard connector.
- 1x 2.88MB Floppy port, 2x High Speed 16550A UART ports and 1x IrDA TX / RX Header.

■POWER

- ATX power supply connector.
- Power-On by LAN(WOL), RTC Alarm, Modem Ring.

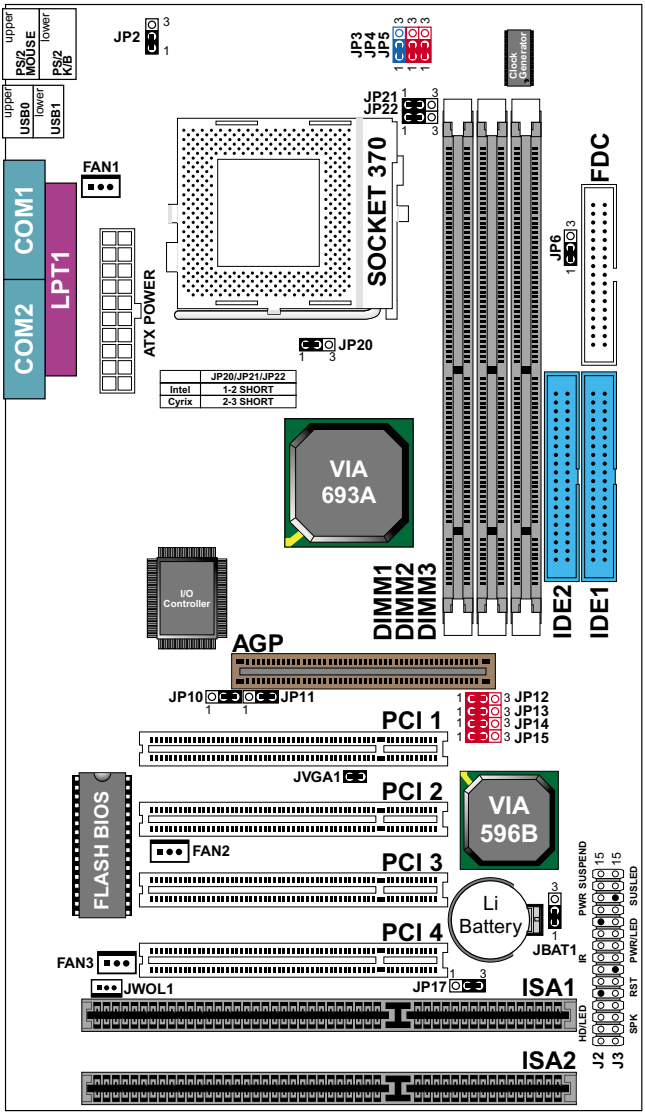
■BIOS

- 2MB FLASH BIOS.
- Licensed AWARD BIOS, supports SCSI / ZIP / LS-120 / CD-ROM boot and ACPI Power Management.

■FORM FACTOR / PCB

- ATX, 4 layers PCB, 17.0cm x 30.5cm size.

MOTHERBOARD DIAGRAM

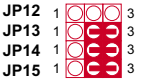
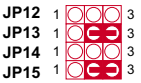
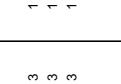
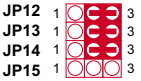
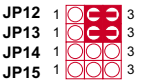
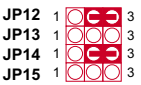
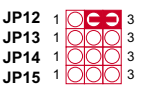


Default setting: Intel Celeron 300A/66MHz.

NOTE: For 100MHz/133MHz CPU environment, the SDRAM sepc must comply with PC-100/PC-133 spec.

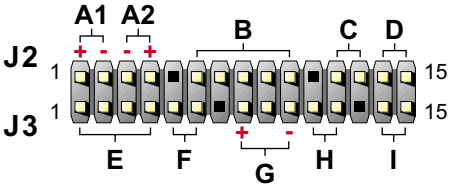
CPU CLOCK SETTING

CPU Type Configuration

CPU MODEL	BUS RATIO	BUS CLOCK
Pentium III 533EB/133# **(133MHz * 4.0x)**		
Celeron 300/66 **(66MHz * 4.5x)** **Pentium III 600EB/133#** **(133MHz * 4.5x)**		
Celeron 333/66 **(66MHz * 5.0x)** **Pentium III 500E/100#** **(100MHz * 5.0x)** **Pentium III 667B/133#** **(133MHz * 5.0x)**		
Celeron 366/66 **(66MHz * 5.5x)** **Pentium III 550E/100#** **(100MHz * 5.5x)** **Pentium III 733B/133#** **(133MHz * 5.5x)**		
Celeron 400/66 **(66MHz * 6.0x)** **Pentium III 600E/100#** **(100MHz * 6.0x)**		
Celeron 433/66 **(66MHz * 6.5x)** **Pentium III 650/100#** **(100MHz * 6.5x)**		
Celeron 466/66 **(66MHz * 7.0x)** **Pentium III 700/100#** **(100MHz * 7.0x)**		
Celeron 500/66 **(66MHz * 7.5x)** **Pentium III 750/100#** **(100MHz * 7.5x)**		
Celeron 533/66 **(66MHz * 8.0x)**		

NOTE: (#) Pentium III Coppermin FC-PGA CPUs.

J U M P E R S E T T I N G



A1 : 1st HDD LED **A2 : 2nd HDD LED**
B. : INFRARED (IR) **C. : POWER SWITCH**
D. : SUSPEND CONNECTOR **E. : SPEAKER**
F. : RESET SWITCH **G. : POWER LED**
H. : KEYLOCK **I. : SUSPEND LED**

FAN#: Onboard FAN (12V) Connector

FAN#	FUNCTION
FAN1	CPU FAN
FAN2	POWER FAN
FAN3	CHASSIS FAN

JP2: Keyboard Power On

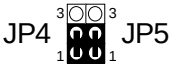
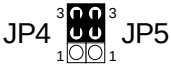
Keyboard Power On	JP2
Disabled (default)	
Enabled	

NOTE 1: If motherboard does not support keyboard power on function, the JP2 will be fixed by jumperwire.
NOTE 2: When the keyboard power on function shows any compatible problem, choose Disabled and report the keyboard model to your vender/maker.
NOTE 3: Keyboard power on function must be set from the BIOS. Refer to the "Integrated Peripherals" sector.

JP3: Signal Level Shift Control

Signal Level Shift Control	JP3
Factory default setting (default)	

JP4 / JP5: CPU Host Clock Select

CPU Host Clock	JP4 / JP5
Auto (default)	
100MHz (overlock)	

JP6: Bus Clock Select

Bus Clock Select	JP6
100MHz	
133MHz	
Auto Select 66/100/133MHz (default)	

JP10 / JP11: USB Port Select

USB Port	JP10 / JP11
Redirect USB port1 to USB connector (default)	
Redirect USB port1 to AGP	

JVGA1: VGA Use

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

	JVGA1
For PCI VGA card	
Normal (default)	

JP17: Power Lost Resume

This jumper allows user to use the switch of ATX power supply to control ON/ OFF switch directly instead of using the power switch on the motherboard.

Power Lost Resume	JP17
Enabled	
Normal (default)	

NOTE: This feature must work with BIOS. Please refer to the BIOS "Power On After PWR-Fail" sector.

JP20 / JP21 / JP22: Intel / Cyrix CPU Select

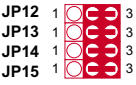
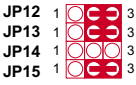
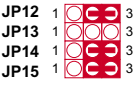
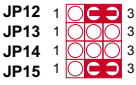
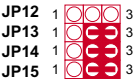
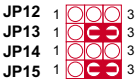
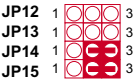
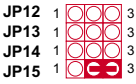
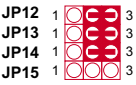
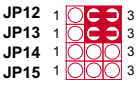
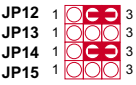
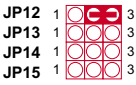
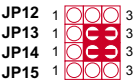
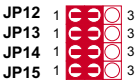
CPU TYPE	JP20	JP21	JP22
Intel CPU (Default)			
Cyrix Joshua CPU			

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.

JBAT1	JBAT1
Clear CMOS Data	
Retain Data (default)	

JP12 / JP13 / JP14 / JP15: Bus Ratio Select

BUS RATIO	JP12~JP15	BUS RATIO	JP12~JP15
2.0x		2.5x	
3.0x		3.5x	
4.0x		4.5x	
5.0x		5.5x	
6.0x		6.5x	
7.0x		7.5x	
8.0x		By BIOS (jumperless setting) (DEFAULT)	

JWOL1: Wake On LAN (WOL) Connector

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

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

This VIA 82C693A chipset 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 <DEL> TO ENTER SETUP

2. Press the <DEL> key and the main program screen will appear as follows:

ROM PCI/ISA BIOS (2A6LGSNE)
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 F10 : Save & Exit Setup	↑ ↓ → ← : Select Item (Shift) F2 : Change Color

3. Using the arrows on your keyboard, select an option, and press <Enter>. Modify the system parameter to reflect the options installed in your system.
4. You may return to the Main Menu anytime be 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.
2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys.

ROM PCI/ISA BIOS (2A69KSNH)
STANDARD CMOS SETUP
AWARD SOFTWARE, INC.

Date (mm:dd:yy) : Tue, Oct 19 1999
Time (hh:mm:ss) : 15 : 6 : 26

HARD DISK	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
Primary Master	: Auto	0M	0	0	0	0	0	AUTO
Primary Slave	: Auto	0M	0	0	0	0	0	AUTO
Secondary Master	: Auto	0M	0	0	0	0	0	AUTO
Secondary Slave	: Auto	0M	0	0	0	0	0	AUTO

Drive A : 1.44, 3.5 in.
Drive B : None

Video : EGA/VGA
Halt On : All Errors

Base Memory : 640K
Extended Memory : 64512K
Other Memory : 384K
Total Memory : 65536K

Esc : Quit
F1 : Help
↑ ↓ → ← : Select Item
(Shift) F2 : Change Color
PU/PD/+/- : Modify

Date (mm:dd:yy) **Time (hh:mm:ss)**	Set the current date and time.
Primary (Secondary) **Master / Slave**	This field records the specification for all non-SCSI Hard Disk Drives installed in your system. Refer to the respective documentation on how to install the drives.
Drive A / B	Set the field to the type(s) of Floppy Disk drive(s) installed in your system. The choice: 360KB, 5.25in. 1.2MB, 5.25in. 720KB, 3.5in. 1.44MB, 3.5in. 2.88MB, 3.5in.
Video	Set the field to the type of video display card installed in your system. The choice: Monochrome, Color 40x25, EGA / VGA, (default) Color 80x25
Halt On	Set this warning feature for the type of errors that will cause the system to halt. The choice: All Errors, (defaults) No Errors, All But Keyboard, All But Diskette, All But Disk / Key

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

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 (2A6LGSNE)
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
Processor Number Feature	: Disabled	D4000-D7FFF Shadow	: Disabled
Quick Power On Self Test	: Enabled	D8000-DBFFF Shadow	: Disabled
Boot Sequence	: A,C,SCSI	DC000-DFFFF Shadow	: Disabled
Swap Floppy Drive	: 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		
Typematic Rate Setting	: Disabled		
Typematic Rate (Chars/Sec)	: 6		
Typematic Delay (Msec)	: 250	ESC : Quit	↑↓→← : Select Item
Security Option	: Setup	F1 : Help	PU/PD/+/- : Modify
PCI/VGA Palette Snoop	: Disabled	F5 : Old Value	(Shift)F2 : Color
OS Select For DRAM > 64MB	: Non-OS2	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. An explanation of the <F>keys follows:

   <F1>: “Help” gives options available for each item.
   <Shift> + <F2>: Change BIOS screen color.
   <F5>: Get the previous values. These values are the values with 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.

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 user to enable or disable the CPU internal cache.

External Cache

Choose Enabled (default) or Disabled. This option allows user to enable or disable the external cache memory.

CPU L2 Cache ECC Checking

Choose Enabled (default) or Disabled.

Processor Number Feature

Choose Enabled or Disabled (default).

Quick Power On Self Test

Choose Enabled (default) or Disabled. This option allows user to speed up the Power-On-Self-Test routine.

Boot Sequence

Default is “A , C, SCSI”. This option determines which drive to boot at first for an operating system.

Swap Floppy Drive

Default is “A, C, SCSI”. This option determines which drive to boot at first for an operating system.

Boot Up Floppy Seek

Enabled (default): During POST, BIOS checks the track number for Floppy Disk drive to see whether it's 40 or 80 tracks.
Disabled: During POST, BIOS will not check the track number for Floppy Disk drive.

Boot Up NumLock Status

On (default): Activate the NumLock function at boot up.
Off: Close the NumLock function at boot up.

IDE HDD Block Mode

Choose Enabled (default) or Disabled. If your hard disk is larger than 540MB, choose Enabled. If you are using IDE HDD AUTO DETECTION option, then BIOS will choose this option automatically.

Note: Some older model HDDs do not provide this feature.

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 (default).

Typematic Rate Setting

Choose Enabled or Disabled (default): Enable this option to adjust the deystroke repeat rate.

Typematic Rate (Char / 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 / AGP.
OS Select for DRAM > 64MB	Non-OS2 (default): For Non-OS/2 operating system. OS: For OS/2 operating system.
Video BIOS Shadow	Enabled (default): Map the VGA BIOS to system RAM. Disabled: Don't map the VGA BIOS to system RAM.
C8000-CBFFF to DC000-DFFFF Shadow	These options are used to shadow other expansion card ROMs.

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

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

ROM PCI/ISA BIOS (2A6LGSNE)
CHIPSET FEATURES SETUP
AWARD SOFTWARE, INC.

Bank 0/1 DRAM Timing : SDRAM 10ns 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 F1 : Help PU/PD/+/- : Modify F5 : Old Value (Shift)F2 : Color F7 : Load Setup Defaults

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

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.

DRAM CLOCK

The setting of this item must depend on the spec of PC100/ PC133. For example, if user chooses HCLK + 33M, that means not only the motherboard but also the SDRAM needs to comply with PC-133 spec.
Choice: Host CLK(default), HCLK-33M or HCLK+33M.

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. Enbable this option will cause memory only connect to 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 256MB. Memory map 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 user to enable / disable the AGP-2x (133MHz clock) 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 keboard is being used.

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

POWER MANAGEMENT SETUP

Power Management Setup changes the system power savings function.

Run the Power Management Setup as follows:

1. Choose “POWER MANAGEMENT SETUP” from the Main Menu and a screen with a list of options will appear.
2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys.

ROM PCI/ISA BIOS (2A6LGSNE)
POWER MANAGEMENT SETUP
AWARD SOFTWARE, INC.

ACPI function	: Disabled	Primary INTR	: ON
Power Management	: User Define	IRQ3 (COM 2)	: Primary
PM Control by APM	: Yes	IRQ4 (COM 1)	: Primary
Video Off After	: Suspend	IRQ5 (LPT 2)	: Primary
Video Off Method	: V/H SYNC+Blank	IRQ6 (Floppy Disk)	: Primary
MODEM Use IRQ	: 3	IRQ7 (LTP 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 (PS/2 Mouse)	: Primary
VGA	: OFF	IRQ13 (Coprpcessor)	: Primary
LPT & COM	: LPT/COM	IRQ14 (Hard Disk)	: Primary
HDD & FDD	: ON	IRQ15 (Reserved)	: Disabled
DMA/Master	: OFF		
Modem Ring Resume	: Disabled	ESC : Quit	↑↓→← : Select Item
Wake Up On LAN	: Disabled	F1 : Help	PU/PD/+/- : Modify
RTC Alarm Resume	: Disabled	F5 : Old Value	(Shift)F2 : Color
		F7 : Load Setup Defaults	

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 After	Choose NA, Suspend, Standby (default) or Doze.
Video Off Method	Choose Blank, DPMS or V/H Sync+Blank (default). You can choose either DPMS or V/H Sync+Blank when ther monitor has the Green function. You need to choose Blank when the monitor has neither the Green function.
Modem Use IRQ	Assign the IRQ number to the modem which is being used so that the ring signal can wake up the system. The default setting is 3 (COM2).
Soft-Off By PWR-BTTN	Instant-Off (default): Turn off the system power at once after pushing the power button. Delay 4 Sec: Turn off the system power 4 seconds after pushing the power button (to meet PC97/98 spec)
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.
Doze Mode	This mode sets the CPU speed down to 33MHz.
Suspend Mode	The option allows you to choose the mode for the different timer. The Suspend mode turns off the CPU and saves the energy of the system.

VGA

When On of VGA, any activity from one of the listed system peripheral devices or IRQs wakes up the system.
Choice: On(default), Off.

LPT & COM

When On of LPT&COM, any activity from one of the listed system peripheral devices or IRQs wakes up the system.
Choice: LPT/COM(default), NONE, LPT or COM.

HDD & FDD

When On of HDD&FDD, any activity from one of the listed system peripheral devices wakes up the system.
Choice: On(default), Off.

DMA / master

When On, any activity from one of the listed system peripheral devices wakes up the system.
Choice: On, Off(default).

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.

Wake On LAN

Enabled: Wake on the system from the LAN card (LAN card must support wake on LAN function and the power supply must provide at least 5V/7750mA standby current)
Disabled(default): Disable Wake On LAN function.

RTC Alarm Rescume

When Enabled, you can set the date and time at the which the RTC(Real Time Clock) alarm awakens the system from suspend mode.
Choice: Disabled(default), Enabled.

Primary INTR

When set to On, any event occurring at will awaken a system which has been powered down.
On(default): The system can not enter the power saving mode when I/O ports or IRQ# is activated.
Off: The system still can enter the power saving mode when I/O ports or IRQ# is activated.

The following is a list of IRQ's(Interrupt ReQuests), which can be exempted much as the COM ports and LPT ports above can. When an I/O device wants to gain the attention of the operating system, it signals this by causing an IRQ to occur. When the operating system is ready to respond to the request, it interrupts itself and performs the service.
When set On, activity will neither prevent the system from going into a power management mode nor awaken it.

IRQ3 (COM2)
IRQ4 (COM1)
IRQ5 (LPT2)
IRQ6 (Floppy Disk)
IRQ7 (LPT1)
IRQ8 (RTC Alarm)

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

PnP/PCI CONFIGURATION SETUP

PnP/PCI Configuration Setup defines PCI bus slots.

Run the PnP/PCI Configuration Setup as follows:

1. Choose “PnP/PCI CONFIGURATION SETUP” from the Main Menu and a screen with a list of options will appear.
2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys.

ROM PCI/ISA BIOS (2A6LGSNE)
PNP/PCI CONFIGURATION
AWARD SOFTWARE, INC.

PNP OS Installed : No Resources Controlled By : Auto Reset Configuration Data : Disabled	CPU to PCI Write Buffer : Enabled PCI Dynamic Bursting : Enabled PCI Master 0 WS Write : Enabled PCI Delay Transaction : Enabled PCI#2 Access #1 Retry : Disabled AGP Master 1 WS Write : Disabled AGP Master 1 WS Read : Disabled Assign IRQ For USB : Enabled Assign IRQ For VGA : Enabled
	ESC : Quit ↑↓→← : Select Item F1 : Help PU/PD/+/- : Modify F5 : Old Value (Shift)F2 : Color F7 : Load Setup Defaults

PNP OS Installed

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

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

Resources Controlled By

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

Reset Configuration Data

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

CPU to PCI Write Buffer

Choose Enabled(default) or Disabled.

PCI Dynamic Bursting

Choose Enabled(default) or Disabled .

PCI Master 0 WS Write

Choose Enabled(default) or Disabled .

PCI Delay Transaction

Choose Enabled(default) or Disabled .

PCI #2 Access #1 Retry

Choose Enabled or Disabled(default).

AGP Master 1 WS Write

Choose Enabled(default) or Disabled.

AGP Master 1 WS Read

Choose Enabled or Disabled(default).

Assign IRQ for USB	Enabled (default): 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 diabled (only IRQ was removed)
Assign IRQ for VGA	Enabled (default): 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 setting.

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

CPU Speed Setting option allows user to adjust CPU's settings and retain some informations inside computer when it is working.

Run the Integrated Peripherals as follows:

1. Choose "CPU SPEED SETTING" from the Main Menu and a screen with a list of options will appear.
2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys.

ROM PCI/ISA BIOS (2A6LGSNE)
CPU SPEED SETUP
AWARD SOFTWARE, INC.

CPU Ratio : X 3 Auto Detect DIMM/PCI Clk : Disabled Spread Spectrum : Disabled CPU Host Clock(CPU/PCI) : Default	ESC : Quit ↑↓→← : Select Item F1 : Help PU/PD/+/- : Modify F5 : Old Value (Shift)F2 : Color F7 : Load Setup Defaults

CPU Ratio	Select the CPU Ratio. The choice: 3.0x (default), 3.5x, 4.0x, 4.5x, 5.0x, 5.5x, 6.0x, 6.5x, 7.0x, 7.5x, 8.0x.
Auto Detect DIMM/PCI clk	Choose Disabled (default) or Enabled. The clock generator will turn off the DIMM clock if this slot is empty.
Spread Spectrum	Choose Disabled (default) or Enabled. This function is designed to EMI test only.
CPU Host Clock (CPU/PCI)	Select the CPU Host Clock. The choice: default, 66/33MHz, 75/37MHz, 83/41MHz, 124/31MHz, 133/33MHz, 140/35MHz, 150/37MHz.

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

INTEGRATED PERIPHERALS

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

Run the Integrated Peripherals as follows:

1. Choose “INTEGRATED PERIPHERALS” from the Main Menu and a screen with a list of options will appear.
2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys.

ROM PCI/ISA BIOS (2A6LGSNE)
INTEGRATED PERPHERALS
AWARD SOFTWARE, INC.

OnChip IDE Channel0	: Enabled	Onboard Parallel Port	: 378/IRQ7
OnChip IDE Channel1	: Enabled	Parallel Port Mode	: ECP + EPP
IDE Prefetch Mode	: Enabled	ECP Mode Use DMA	: 3
Primary Master PIO	: Auto	EPP Mode Select	: EPP1.7
Primary Slave PIO	: Auto	Power On Function	:
Secondary Master PIO	: Auto	KB Power On Password	: Enter
Secondary Slave PIO	: Auto	Hot Key Power On	: Ctrl - F1
Primary Master UDMA	: Auto		
Primary Slave UDMA	: Auto		
Secondary Master UDMA	: Auto		
Secondary Slave UDMA	: Auto		
Init Display First	: PCI Slot		
KBC input clock	: 8 MHz		
Onboard FDC Controller	: Enabled		
Onboard Serial Port 1	: 3F8/IRQ4		
Onboard Serial Port 2	: 2F8/IRQ3		
UART Mode Select	: IrDA	ESC : Quit	↑↓→← : Select Item
UART2 Duplex Mode	: Half	F1 : Help	PU/PD/+/- : Modify
RxD, TxD Active	: Lo, Lo	F5 : Old Value	(Shift)F2 : Color
IR Transmission Delay	: Disabled	F7 : Load Setup Defaults	

OnChip IDE Channel 0 / 1

The chipset contains a PCI IDE interface with support from two IDE channels. Select Enabled to activate the first and/or the second IDE interface. Select Disabled to deactivate an interface, if you install a primary and/or second add-on IDE interface.
The choice: Enabled(default), Disabled.

IDE Prefetch Mode

Choose Enable(default), Disabled.

Primary Master/Slave PIO
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.

Primary Master/Slave UDMA
Secondary Master/Slave UDMA

Enabled (default): Turn on the onboard IDE function.
Disabled: Turn off the onboard IDE function.

Init Display First

This option allows you to decide to activate PCI Slot or AGP first.
Choose PCI Slot(default), AGP.

KBC input clock

Choose 6MHz, 8MHz(default), 12MHz or 16MHz. There might be a compatible problem when it is above 8MHz.

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 Port1

Choose Auto (default), 3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3 or Disabled. Don't set port 1 & 2 to the same value, except when setting at Disabled.

Onboard Serial Port2

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

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

UART2 Duplex Mode Choose Half (default) or Full.

RxD, TxD Active Choose Lo,Lo (default) / Lo,Hi / Hi,Hi / Hi,Lo.

Note: The above 2 options won't work unless UART2 Mode HPSIR/ASKIR is selected.

IR Transmission Delay Enabled: Enable delay when transferring data.
Disabled (default): Disable delay when transferring data.

Onboard Paralle Port Choose the printer I/O address: 378H/IRQ7 (default), 3BCH/IRQ7, 278H/IRQ5 or Disabled.

Parallel Port Mode Choose Normal (default), ECP/EPP, SPP 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.

EPP Mode Select Choose EPP1.7 (default) or EPP1.9. EPP1.9 supports hardware handshake. This setting is dependent upon your EPP device.

Note: The above 2 options will not be displayed unless the EPP/ECP is selected.

KB Power On Password	When user sets a password for keyboard, the password user set that return the system to Full On state.
Hot Key Power On	Boot up the system via predetermined keyboard hot key. The choice: <Ctrl> + <F1>...<F12>

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

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” from the Main Menu and press <Enter>. The following message appears:

   “Enter Password:”

2. The first time you run this option, enter your own password up to 8 characters and press <Enter>. The screen doesn’t display the entered characters.
3. After you entered 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 back to default seting. You need to run the BIOS setup program and re-define all settings 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 selected 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 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 A

FLASH MEMORY UPDATE INSTALLATION

1. Download BIOS files and flash utility from your board vendor. They are: awdflash.exe and .bin file.
2. Copy them to bootable diskette and boot from diskette.
3. The diskette cannot include memory manager e.g. emm386.exe,qemm and himem.sys, otherwise there will appear an error message “insufficient memory”.
4. Type “awdflash 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 ask 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.

APPENDIX B DRIVER INSTALLATION

If you are using Windows 98 SE**, you do not need to install the** 4-in-1 driver **as the IRQ Routing Driver and the ACPI Registry are already incorporated into the operating system. Users with Windows 98 SE may update the IDE Busmaster and AGP drivers by installing them individually.**

PART 1:

1. Put the CD into your CD-ROM.
2. There appears a welcome window.
   (If doesn't, it means that your CD-ROM auto-run function does not enable, but you still can browser the CD via Windows Explorer and change the directory to where your CD-ROM directory is. Then run the **autorun.exe**)
3. Select "**Install Driver**".
4. Select "**Install VIA Chipsets Driver**".
5. Select "I**nstall 4in1 Driver**".
6. Then the program will automatically setup all drivers your system needs.
7. Finally, the system will re-boot.

NOTE: AFTER INSTALLED " 4in1 Driver***", USER DOESN'T NEED TO INSTALL ANY OTHER PROGRAM IN PART 2.***

PART 2:

CAUTION!! ALL THE VIA MAINBOARD MUST INSTALL FOLLOWING 3 DRIVERS!!!

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\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

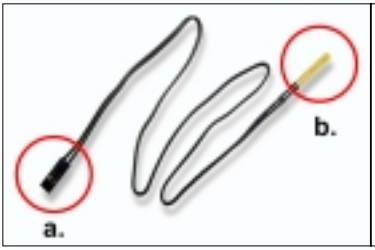
Windows95/Windows98:

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".**

APPENDIX C THE USAGE OF RT2

■ Thermal Sensor Connector



a: Connect to RT2.
b: Connect this thermal sensor to particular device which generates lots of heat such as Hard Disk, VGA chip, etc. When connected, user could observe the temperature change from the BIOS program.

■ VIA Hardware Monitor Setup

1. Make sure that the CD is in the CD-ROM.
2. There will appear a welcome window, please use the mouse to choose "**Install Driver**" item.
   (If not, that means user's CD-ROM autorun function is disabled, but user could still install the program via Windows Explorer.)
3. Choose "**Install VIA Chipset Driver**" item, then choose "**Install VIA Hardware Monitor**" item.
4. The setup program will install Hardware Monitor software automatically.