User's Guide

CB641X-BX Main Board

DAEWOO

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1. Introduction

Overview

CB641X-BX motherboard integrates the latest advances in processor, memory, and I/O technologies into an ATX form factor(304.8 x 190mm) that combines performance, flexibility, and easy of use into high integrated capable of meeting a variety of price/performance levels.
CB641X-BX supports not only FSB(Front Side Bus) 66MHz but also FSB 100MHz.
Pentium II 350MHz~450MHz with FSB 100MHz can be supported for the higher performance level.

CB641X-BX motherboard supports Intel Pentium II processor based on the Intel 440BX PCI sets(82443BX and 82371EB). Three standard 168-pin DIMM Sockets with memory size up to 384MB support Synchronous DRAM memory.

The Intel 82371EB PCI-to-ISA/IDE Xcelerator(PIIX 4E) provides an integrated Bus Master IDE controller and Ultra DMA/33 with high performance IDE interfaces for up to four devices.

In addition, the CB641X-BX comes with an AGP(Accelerated Graphics Port) bus slot, faster than the current 33MHz PCI bus. The AGP bus provides a direct connection between graphics subsystem and system memory.

CB641X-BX provides two USB(Universal Serial Bus) ports to fit today and tomorrow's requirement.

Caution :
There is the danger of an explosion if the battery is incorrectly replaced. Replace the battery with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the battery manufacturer' s instructions.

Main Features

1. Processor :

- Single Intel Slot 1 connector
- Support to Intel Pentium II - 350/400/450 MHz processor using FSB 100MHz
- Support to Intel Pentium II-233/266/300/333 MHz processor using FSB 66MHz
- Integrated Voltage Regulator Module
- Support to Intel Celeron processor

2. Chipsets :

2-1. 82443BX PCI/AGP Controller

- Processor interface control
  - ▶ Processor host bus speed up to 100MHz
- Integrated DRAM controller
  - ▶ Support for synchronous DRAM(SDRAM)
  - ▶ Support for 4-, 16-, 64-Mbit DRAM devices
- Accelerated Graphics Port interface
- Fully-synchronous PCI bus interface
- Data Buffering
  - ▶ Host-to-DRAM, PCI-to-DRAM, and AGP-to-DRAM write-data buffering

2-2. 82371EB PCI ISA/IDE Xcelerator(PIIX4E)

- Multifunction PCI-to-ISA bridge
- USB controller
  - ▶ Two USB ports
  - ▶ Support for UHCI design guide revision 1.1 interface
- Integrated Dual-channel enhanced IDE interface
  - ▶ Support for up to four IDE devices
  - ▶ Support for PIO Mode 4 transfer(up to 16MB/s)and Ultra DMA/33 synchronous DMA mode transfer(up to 33MB/s)
- Enhanced DMA controller
- Interrupt controller based on 82C59
- Power management logic
- Real-Time Clock
- 16-bit counters/timers based 82C54

2-3. ITE 8679F Super I/O Controller

- Serial ports : Two 16550 compatible UARTs
- Parallel port : Standard / EPP / ECP mode support
- Floppy disk controller
- Keyboard and Mouse controller
- Support an IrDA and Consumer IR-compliant infrared interface

3. Systme BIOS :

- Award flash BIOS(4.51PG)

4. DIMM Memory Socket :

- Provide 3 pieces of 168-pin DIMM socket.
- Support to 8/16/32/64/128 MB unbuffered Synchronous DRAM (SDRAM) Module.
- Support the single- or double-sided DIMMs.

5. Expansion Slots :

- Two 16-bit ISA slots with 100% ISA compatible function.
- Four 32-bit PCI slots all support PCI master.
  - ▶ PCI specification version 2.1.
- One 32-bit A.G.P slot support up to 528MB/s transfer rate
  - ▶ A.G.P specification revision 1.0.
  - ▶ Synchronous coupling to the host bus frequency.

6. PS/2 Keyboard and PS/2 Mouse Set :

- PS/2 keyboard & PS/2 mouse connector are located on the back panel.

7. Serial / Parallel Ports :

- One multi-mode parallel port with chip-protect circuitry supports standard, enhanced(EPP), high speed(ECP) mode(25-pin D-Sub).
- Two high speed 16C550 UART compatible buffer fast serial port(9-pin D-Sub).

8. IDE Support :
   - Provide two independent bus-mastering PCI IDE interfaces(Primary and Secondary IDE).
   - Support PIO Mode 4 transfer(up to 16MB/s) and Ultra DMA/33 synchronous-DMA mode transfers(up to 33MB/s).
   - The BIOS automatically detects the IDE device transfer rate and translation mode.

9. FDD Support :
   - Provides 34-pin box header.
   - Supports 360K/720K/1.2M/1.44M/2.88M or 3 mode floppy drives.

10. Power Supply Connector :
   - Provedes the connectors for ATX PC power supply(20 pin).

11. USB Connector :
   - Provides two USB port module.
   - Fully supports Universal Host Controller Interface(UHCI) and uses UHCI-compatible software drivers.

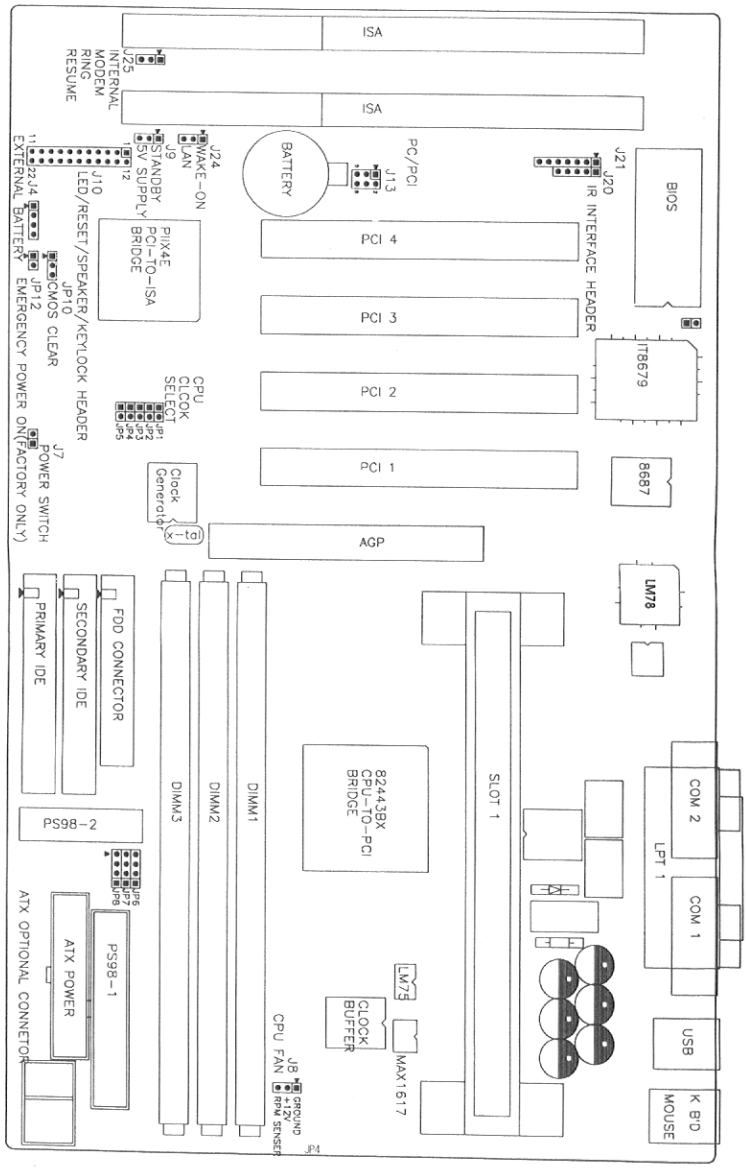
12. RTC & Back-up Battery :
   - Integrated into PIIX4E (82371EB) chipset.
   - An external coin-cell battery powers the real-time clock and CMOS memory
   - When the computer is not plugged into a wall socket, the battery has an established life of three years. When the computer is plugged in, the 3.3V standby current from the power supply extends the life of the battery.

13. Keyboard Controller :
   - It's function compatible with Intel 8042 Keyboard Controller, which provides enhanced gate A20 switching & PS/2 compatible mouse.
   - AMI keyboard BIOS
   - Integrated into Supper I/O chipset.

14. Hardware monitoring(Manufactural option) :
   - CB641X-BX provides a solution for H/W monitoring, LM78.
   - Monitor VRM and power supply voltages, temperatures, and fan speed.
   - Provides an application program for system monitoring in Windows 95.

15. CPU temperature monitoring(Manufactural option) :
   - CB641X-BX provides a solution for thermal monitoring, LM75.
   - Checking CPU temperature and throttling when CPU temperature is too high.

Motherboard Layout



2. Installation

This Chapter provides information on how to install and configure CB641X-BX motherboard.

Check List

The standard packing of CB641X-BX should include :

- ☐ CB641X-BX motherboard
- ☐ 1 IDE cable
- ☐ 1 Floppy cable
- ☐ CB641X-BX User's Manual
- ☐ Device driver diskette
- ☐ Retention Mechanism Kit

Installation Steps

Installing of the CB641X-BX motherboard depends on the type of case you use. The CB641X-BX motherboard is designed for the ATX form factor and must be installed in an ATX chassis.

Before using your computer, you must complete the following steps :

1. **Set Jumpers**
2. **Installing the System Memory**
3. **Installing the CPU**
4. **Installing Cables**

Set Jumpers

Serveral hardware setting are made through the use of jumper cap to connect jumper pins on the motherboard. See motherboard layout on page 1-5 for location of jumpers. The jumper settings will be described numerically such as '1-2', '2-3' or 'On(Short)', 'Off(Open)'.

Warning!

Computer motherboards and Add-on cards contain very delicate IC chips. To protect them against damage from static electricity, you should follow some precaution whenever you work on your computer.

1. *Unplug your computer when working on the inside.*
2. *Use a grounded wrist strap before handing computer components. If you do not have one, touch both of your hands to a safely grounded object or to a metal object, such as the power supply case.*
3. *Hold components by the edges and try not to touch such the IC chips, leads or connectors, or other components.*
4. *Place components on a grounded anti-static pad or on the bag that came with the component whenever the components are separated from the system.*

1. Clear CMOS RAM(JP10)

The CMOS RAM is powered by the onboard coin-cell battery or power supply. To clear the CMOS Data : (1) Turn off your computer and unplug your AC power, (2) Close pins 2-3, wait five seconds and place the jumper back on pins 1-2. (The jumper must be placed back on pins 1-2 for the system to function properly), (3) Turn on your computer.

2. IOQ depth setting

Jumper	Function	Settings
JP9	1	On
	Max. (Default)	Off

3. CPU Core : BUS Frequency Multiple

To install the CPU at its correct frequency, Please refer the following table to set up CPU frequency.

BUS CLOCK SPEED	JP5	CPU CLOCK SPEED	CLOCK MULTIPLIER	JP1	JP2	JP3	JP4
66Mhz	ON	233Mhz	3.5X	ON	OFF	OFF	ON
66Mhz	ON	266Mhz	4.0X	ON	ON	ON	OFF
66Mhz	ON	300Mhz	4.5X	ON	OFF	ON	OFF
66Mhz	ON	333Mhz	5.0X	ON	ON	OFF	OFF

BUS CLOCK SPEED	JP5	CPU CLOCK SPEED	CLOCK MULTIPLIER	JP1	JP2	JP3	JP4
100Mhz	OFF	350Mhz	3.5X	ON	OFF	OFF	ON
100Mhz	OFF	400Mhz	4.0X	ON	ON	ON	OFF
100Mhz	OFF	450Mhz	4.5X	ON	OFF	ON	OFF
100Mhz	OFF	500Mhz	5.0X	ON	ON	OFF	OFF

Table 2-1. Pentium II CPU Frequency

Installing the System Memory

The CB641X-BX motherboard has three 3.3V unbuffered 64/72-bit, 168-pin DIMM socket for maximum of 384MB of SDRAM memory.

1. Adding Memory

The following is a list of rules to follow when installing DIMMs. If you follow these rules, your upgrade should be trouble-free :

- Use PC100 SDRAM.
- Single-side and double-side memory module are supported.
- Different memory types and sized in separate banks will cause the performance of the memory to run at the speed of the slowest RAM installed, and/or cause operating system stability problems.

2. Memory Configuration

DIMM memory configuration is auto-banking and therefore does not need to be installed in any particular order. The following table lists a number of possible memory configurations.

DIMM			TOTAL
DIMM1	DIMM2	DIMM3	
8MB	8MB	8MB	DIMM1+DIMM2+DIMM3 The combination of memory size is from 8 MB to maximum 384 MB. All DIMM sockets can use SDRAM memory.
16MB	16MB	16MB	
32MB	32MB	32MB	
64MB	64MB	64MB	
128MB	128MB	128MB	

Table 2-2. CB641X-BX Memory Configurations

<Note> In the case of using the Pentium II 350~450MHz CPU with 100MHz FSB clock, please use the DIMM satisfied PC100 specification.
The combination of incorrect DIMM & CPU may cause the performance down and/or cause operating system stability problems

3. Installing and Removing DIMMs

To install the DIMMs, locate the memory banks on the motherboard and perform the following steps :

1. Hold the DIMM so that notched edge is aligned with the notch on the DIMM socket(Figure 2-1).
2. Insert the DIMM at a 90 degree angle.
3. Gently push the DIMM straight down until it locks into place(past the release tabs).

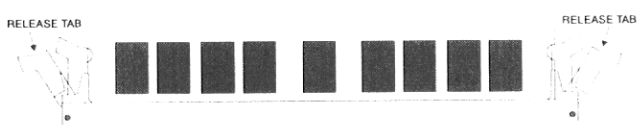


Figure 2-1. Installing a 168-pin DIMM

To remove DIMMs, follow the steps below:

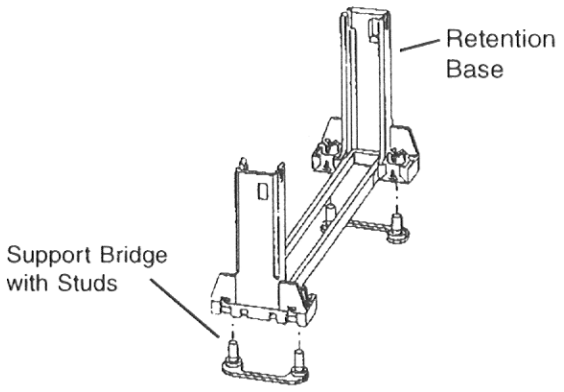
1. With both thumbs (or fingers), press the release tabs away from the socket.
2. With the DIMM free from the release tabs, lift the memory module up and place in the anti-static bag or package.

Installing the CPU

The CB641X-BX is designed to support single Pentium II processor. The Pentium II processor comes installed in a Single Edge Contact (SEC) cartridge that connects into "Slot 1" on the motherboard.
A Retention Mechanism is supplied to anchor the processor to the motherboard. Attach the Retention Mechanism before inserting the processor.

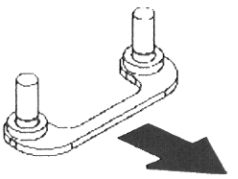
1. Installing the CPU Retention Mechanism

Before you begin, verify that your Retention Mechanism Kit contains the following items:
o Retention Base (black plastic module).
o Support Bridges with Studs (plastic mounts)



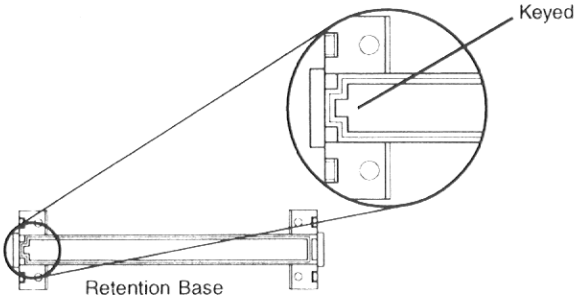
Follow the steps below to install the kit:

1. Locate the four Retention Base holes (near each end of the Slot 1 socket). Insert the two Support Bridges with studs (plastic mounts) from the bottom side of the motherboard toward the component side until they snap into place.

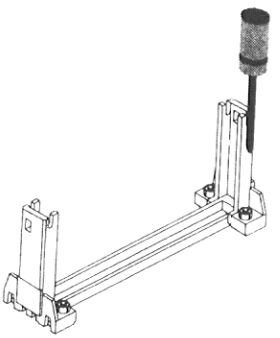


(Orient the loops toward the outer edges of the system board)

2. Place the Retention Base over the Slot 1 connector and insert it down the Support Bridge with studs. Note the "Keyed" location of both Slot 1 and the Retention Base.



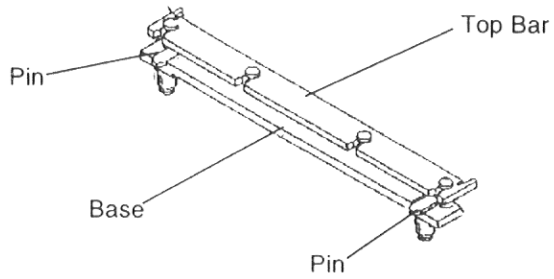
3. Using a screwdriver, tighten all four sides of Retention Base.



2. Installing a CPU

Follow the steps below to install the Pentium II processor:

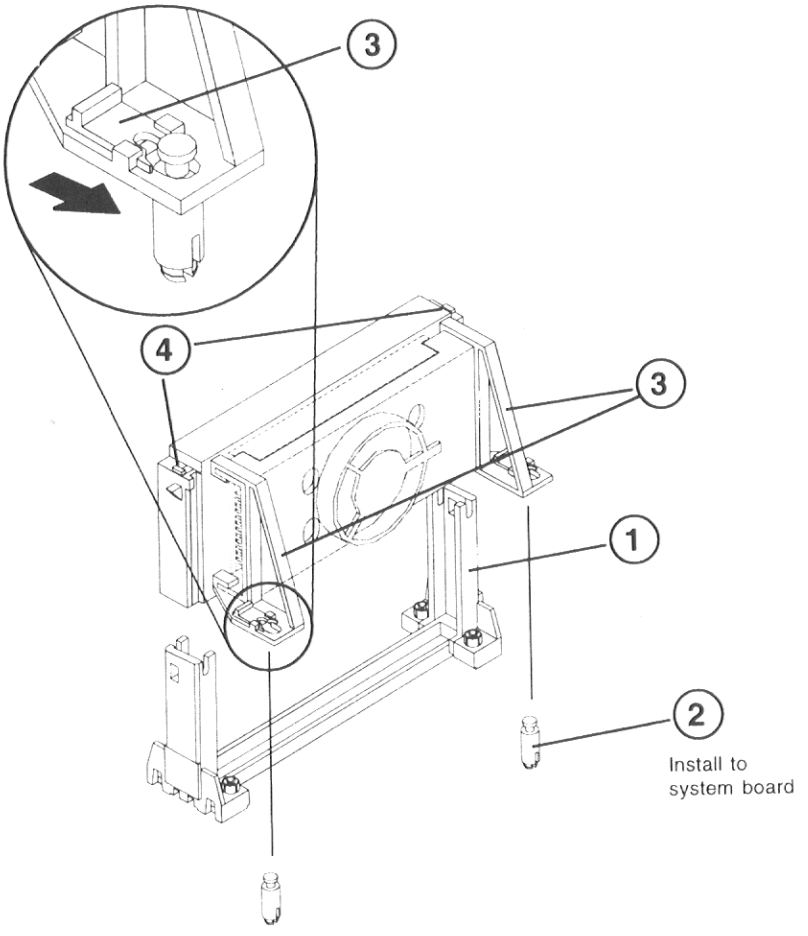
1. Locate the Slot 1 connector.
2. If you are installing the boxed version of the Pentium II processor, follow the instructions in the section "3. Installing a CPU (Boxed version)"
3. The Heat sink supporters consist of a top bar, base and two pins. Gently insert the Heatsink base into the holes next to the Slot 1 socket. Push down until the base snaps into place.



4. Lock the base into place by inserting a pin down into the base on the both sides.
5. Gently insert the processor cartridge down into the Retention Module, making sure the connector on the processor cartridge and Slot 1 connector are aligned.
6. Push the processor cartridge down until it snaps into place.
7. Lock the processor cartridge into place by pushing outward on the tabs located on both sides of the processor cartridge. The processor cartridge is locked when the tabs snap into the holes on the side of the Retention Mechanism.
8. After the processor cartridge is locked into place, connect the Heatsink's top bar to the base.

3. Installing the CPU (Boxed version)

A boxed version of the CPU is offered through Intel. This packing uses an active cooling fan. The mounting hardware is described below. For detailed instructions, please refer to the documentation that in supplied with your CPU.



Installing Cables

1. CPU Fan connector (J8)

If you are installing the boxed version of the Pentium II processor, you can use this header to connect the CPU's fan cable (3-pin or 2-pin)

2. Primary / Secondary IDE connectors (J14 / J15)

These connectors support the provided 40-pin ribbon cable. After connecting the single end to the motherboard, connect the two plugs at the other end to your hard disk(s).

3. FDD connector (J26)

This connector supports the provided 34-pin ribbon cable. After connecting the single end to the motherboard, connect the two plugs on the other end to the floppy drives. The CB641X-BX uses the right angle box header for the long PCI card.

4. USB connector (J12)

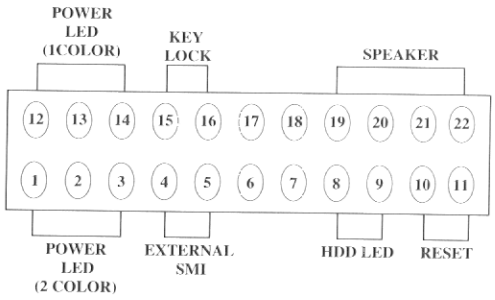
The CB641X-BX motherboard provides two USB ports.
The 5V lines to these connectors are protected with Poly switch circuit.

5. IR connectors (J20 & J21)

CB641X-BX provide two connectors which can support IrDA (J20) and Fast IR (J21) receiver module. It gives users IR wireless data exchange directly from mobile computers, printers and PDAs,...etc.

6. Front Panel Switch connector (J10)

This connector supports the signals of the Power LED, HDD LED, Reset Switch, Suspend/Resume Switch, Internal Speaker and Key Lock.



Pin Number	Description	Pin Number	Description
Pin 1	Power LED	Pin 12	Power LED
Pin 2	GND	Pin 13	N.C
Pin 3	Green LED	Pin 14	GND
Pin 4	External SMI	Pin 15	Key Lock
Pin 5	GND	Pin 16	GND
Pin 6	Green LED	Pin17	N.C
Pin 7	GND	Pin 18	N.C
Pin 8	+5V	Pin 19	+5V
Pin 9	HDD LED	Pin 20	GND
Pin 10	GND	Pin 21	GND
Pin 11	H/W Reset	Pin 22	Speaker

7. Power Switch connector (J7)

This connector is used to provide a way of the user to turn the system on. Connect it to the power on push button on the front panel.

<Note>
In order to prevent the system from shut down by mistake, the CB641X-BX motherboard provides one optional item of the BIOS setup (refer to "3-4 Power Management Setup").
This item is called "Soft-Off by PWR-BTTN". The function is as follows:

Delay 4 sec:

1. Pushing the button one time will change the system from Normal operation mode to Suspend mode. Pushing the button again will wake up the system.
2. Pushing the power button more than 4 seconds will shut down the system.

Instant-Off:

Pushing the power button one time will turn the system on, pushing again will turn the system off.

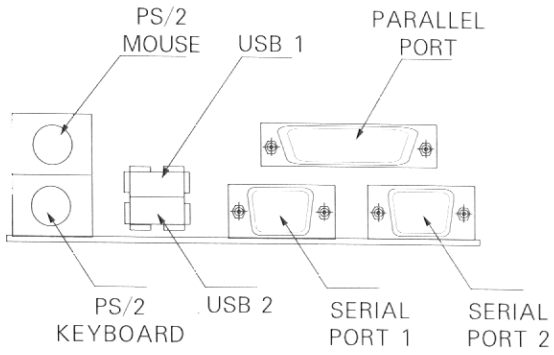


Figure 2-2 External connectors

How to Install USB in windows 95.

CB641X-BX Mainboard provide 2 USB ports. USB can be supported in the windows 95 SR II and later version and windows 98.

In the windows 95 SR I and earlier version, windows 95 can not support USB, and setting "PCI Card" in other device.

In order to use USB devices in windows 95 SR II,

(1) Execute "Usbsupp.exe" file in the "other\usb" directory of windows 95 install CD.

(2) Remove "? PCI Universal serial Bus" and Refresh in device manager, and then windows 95 will find new Hard ware.

The location of new driver is " C: \ windows \ system" after finding new Hardware, restart your system.

How to Install Inf update program in windows 95.

(1) Execute "Infup.exe" in the provided diskette or Master-CD, and then windows 95 will restart and find new hardware automatically.

3. BIOS Setup

This chapter provides information on how the setup program allows you to configure the function and device of your computer and how to configure each item on the setup menus.

Before the computer can operate, it must known what devices are installed in it. These devices include floppy and fixed-disk drives, video, and so forth. Taken together, the presence or absence of these comprise the system configuration, Use the SETUP program to verify or change the system configuration.

Oradinarily, there should be no need to run SETUP the first time you start you start you system, since your computer comes from the factory ready to use. you must, however, run the SETUP program each time you make any changes to your computer's configuration, such as adding drives, and so forth. you can also run it to verify the system configuration.

3-1 Starting Setup

The SETUP program is permanently stored in a "Flash EEPROM" and not contained on disk.
The SETUP program can be accessed:

- When powering up the system & When resetting the system
- When the system detects an error and prompts

1. Accessing SETUP When Powering Up the System

To access the SETUP program when powering up the system, turn the computer power on. The system BIOS will fist test the system components and then display a message similar to the following:

- Press 〈DEL〉 to enter setup

Before the above message disappears, press the 〈DEL〉 key to activate the SETUP program.

2. Accessing SETUP When Resetting the System

Reset the system by either pressing the reset button or the key combination.

The system will display the following message:

- Press 〈DEL〉 to enter setup

Before the above message disappears, press 〈DEL〉 key to activate the SETUP program.

3. Accessing SETUP When the System Prompts

If the system BIOS detects a software or hardware error during the self-testing process, the system displays the following message:

- Press〈F1〉to continue,〈DEL〉to Enter SETUP

press 〈F1〉 to continue the boot sequence 〈DEL〉 to run SETUP.

4. Accessing SETUP Menus

SETUP provides access to primary menus from which you modify the system configuration.

SETUP always displays the Main Menu when you start the program. Primary menus include:

- STANDARD CMOS SETUP - This option allows users to check or modify the basic system configuration.
- BIOS FEATURES SETUP - This option is used to set the various system options for the users, including virus warming, extermal cache, security option, boot operations, and video BIOS shadow, etc...
- CHIPSET FEATURES SETUP - This option allows users to control the features of chipset.
- POWER MANAGEMENT SETUP - This option allows users to set the power saving status for reducing the power consumption.
- PNP/PCI CONFIGURATION SETUP - This option is used to set the various system function and internal addresses of the PCI devices. Allows users to configure system IRQ and DMA to PCI/ISA PnP or Legacy ISA.

ROM PCI/ISA BIOS(CB641XBX)
CMOS SETUP UTILITY
AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP	USER PASSWORD
POWER MANAGEMENT SETUP	IDE HDD AUTO DETECTION
PNP/PCI CONFIGURATION	SAVE & EXIT SETUP
LOAD BIOS DEFAULTS	EXIT WITHOUT SAVING
LOAD SETUP DEFAULTS	
ESC : Quit	↑ ↓ →← : Select Item
F10 : Save & Exit Setup	(Shift)F2 : Change Color
Time, Date, Hard Disk, Type ...	

Figure 3 -1. SETUP Main Menu

- **LOAD BIOS DEFAULTS** - User can load the BIOS default values to boot the system safely.
- **LOAD SETUP DEFAULTS** - This option supports the better performance for the system.
- **INTEGRATED PERIPHERALS** - This option allows users to decide how many kinds peripherals need to change their I/O type, mode and used or not. This options also allows users to set the various system function and onboard PCI IDE controller.
- **SUPERVISOR PASSWORD** - Password is required when entering and changing all of the SETUP option or booting your system. Users can change the current password stored in the CMOS by accessing this option.
- **USER PASSWORD**- Password is required when booting your system and entering to change only the USER PASSWORD. Users can change the current password stored in the CMOS by accessing the option.

- **IDE HDD AUTO DETECTION** - This option can automatically detect the hard disk drive type(s) including the number of cylinders and heads, write precompensation time, read/write head landing zone, and number of sectors per track.
- **SAVE & EXIT SETUP** - After saving the changes what you have made in the SETUP program, then exit and reboot the system.
- **EXIT WITHOUT SAVING** - Abandon all previous settings, then exit and reboot the system. After choosing an menu item from the SETUP main menu, move the cursor by modify the setting 〈Up〉, 〈Down〉, 〈Left〉, 〈Rigft〉, Arrow keys and press 〈Enter〉 key. To modify the setting of an option, simply press the 〈PgUp〉 or 〈+〉 and the 〈PgDn〉 or 〈-〉 keys. Press the 〈F2〉 key when changing the color setting, 〈F1〉 for a context sensitive help function, and the 〈Esc〉 key when quitting SETUP.

3-2. Standard CMOS Setup

ROM PCI/ISA BIOS (CB641XBX)
STANDARD CMOS SETUP
AWARD SOFTWARE, INC

Data (mm:dd:yy) : Fri, Mar 27 1998
Time (hh:mm:ss) : 18 : 12 : 26

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
Floppy 3 Mode Support : Disabled

Video : EGA/VGA
Halt On : All, But Keyboard

Base Memory : 640K
Extended Memory : 31744K
Other Memory : 384K

TOTAL Memory : 32768K

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

Figure 3 -2 STANDARD CMOS Setup Menu

1. **Date** - Allows manual setting of the electronic calendar on the main board.
2. **Time** - Sets the system's intemal clock which includes hoyr, minutes, and seconds.
3. **Primary Master / Primary Slave / Secondary Master / Secondary Slave** - Specifies the physical and electronic properties of the standard hard disk installed. Relevant specifications include the type, number of cylinders(CYLS), heads(HEAD), write precompensation time(PRECOMP), read/write head landing zone(LANDZ), number of sectors per track(SECTOR), and HDD specifications and the function of the IDE HDD Auto Detection option in the main menu. The system BIOS will automatically detect the hard drive installed on the system upon boot-up.

☞ ***Large Hard Disk Modes***

Test last of the drive parameter - Mode - has four options, Normal, LBA,Large, Auto.

Normal : For IDE hard disks of 528MB or less.

LBA : This stands for Logical Block Addressing, the current standard access mode for large IDE hard disk drive. It allows the use of hard disks larger than 528MB by causing the IDE controller to translate between the logical address, it create and the hard disk's actual physical address. The maximum drive size supported is 8.4GB.

Large : For 1GB or smaller drives with more than 1024 cylinders and no LBA support. This access mode causes the operating System to treat the drive as if it has fewer than 1024 cylinders by dividing the cylinder total in half and doubling the Most large IDE hard disk drives currently available use the LBA mode.

Use the Auto setting to automatically detect the correct mode for new drives.

4. **Drive A:/B** : - Specifies the capacity and format of the floppy drive installed in your system.

5. **Floppy 3 Mode Support** - If mode 3 floppy is installed, enabling this item make floppy diskette only compatible to the floppy diskette format of Japan Spec. : - 1.2MB, 3.5inch.

6. **Video** - Specifies the display adapter installed.

7. **Half On** - Enables the system to half on several condition/options.
   The choices : "All Errors", "All, but keyboard", "All, but diskette", "All, but Disk/key", "System Test Only"

8. **Base/Extended/Other Memory** - A small section in the lower right corner of the screen displays important information about your system which includes the base, extended, and other memory sizes. They are updated automatically by the SETUP program according to the status detected by the BIOS self-test. This section of the Standard CMOS SETUP screen is for viewing purpose only and manual modifications and not allowed.

3.3 BIOS Features SETUP

ROM PCI/ISA BIOS (CB641XBX)
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	: Enabled		
Boot Up NumLock Status	: On		
GATE A20 Option	: FAST		
Typematic Rate Setting	: Disabled		
Typematic Rate (Chars/Sec)	: 6		
Typematic Delay (Msec)	: 250		
Security Option	: Setup		
PCI/VGA Palette Snoop	: Disabled	ESC : Quit	↑ ↓ → ← : Select Item
Assign IRQ For VGA	: Enabled	F1 : Help	PU/PD/+/-: Modify
Assign IRQ For USB	: Enabled	F5 : Old Values	(Shift)F2 : Color
OS Select For DRAM > 64MB	: Non-OS2	F6 : Load BIOS Defaults	
Report No FDD For WIN 95	: No	F7 : Load Setup Defaults	

Figure 3-3. BIOS Features Setup Menu

1. **Virus Warning** - Allows the virus warning feature for the hard disk boot sector to display a warning message and produce a beep sound whenever an attempt is made to write on the hard disk's boot sector. The Choices : Enabled, Disabled

2. **CPU Internal Cache** - Enables the internal code/data cache of CPU when set to "Enabled". The Choices : Enabled, Disabled

3. **External Cache** - Enables the on-board secondary cache when set to "Enabled".

4. **CPU L2 Cache ECC Checking** - Enables the ECC(Error Checking & Correction) checking of Pentium Ⅱ L2 Cache when set to "Enabled"

5. **Quick Power On Self Test** - Allows the power on self test to run at either a fast or a normal speed. The Choices : Enabled, Disabled

6. **Boot Sequence** - Selects the drive where the system would search for the operating system to run with. The Choices :
   - A,C,SCSI
   - C,A,SCSI
   - C,CDROM,A
   - CDROM,C,A
   - D,A,SCSI
   - E,A,SCSI
   - F,A,SCSI
   - SCSI,A,C
   - SCSI,C,A
   - C only
   - LS120

7. **Swap Floppy Drive** - "Enabled" will effectively change the A: and the B": to A:drive."Disabled" sets the floppy drives in their default state.

8. **Boot Up Floppy Seek** - Check if the floppy drives installed on the system are correct or not. This option usually occurs when the magnetic heads of the floppy drives produce a The Choices : Enabled, Disabled

9. **Boot Up NumLock Status** - This allows to determine the default state of the numeric keypad. By default, the system boots up with NumLock on.
   The Choices : On, Off

10. **Gate A20 Option** - Boots the performance of system with software using the 80286 protected mode such as OS/2, UNIX. This options determines the accessibility of the extended memory.
    The Choices : FAST, Normal

11. **Typematic Rate Setting** - Defines the setting of the keyboard's typematic rate.
    The Choices : Enabled, Disabled

12. **Typematic Rate 〈Char/Sec〉** - Specifies the key repeat rate, in seconds, of keyboard character. The Choices : /68/10/12/15/20/24/30

13. **Typematic Delay 〈Msec〉** - Select the delay, in milliseconds, before a key repeat. The Choices : 250/500/750/1000

14. **Security Option** - Determines whether the password will be asked for in every boot(System), or when entering into the SETUP program(Setup). Refer to the section entitled SUPERVISOR PASSWORD for the password setting.

15. **PCI/VGA Palette snoop** - Selects "Enabled" to solve the abnormal color in windows while using ISA MPEG and PCI VGA card.
    The Choices : Enabled, Didabled

16. **Assign IRQ For VGA** - Sets the interrupt request (IRQ) line assigned to the VGA (if any) on your system.
    The Choice : Enabled, Disabled

17. **Assign IRQ For USB** - Sets the interrupt request (IRQ) line assigned to the USB on your system.
    The Choice : Enabled, Disabled

18. **OS Select For DRAM > 64MB** - Select the OS if DRAM > 64MB.
The Choices : Non-OS2, OS2

19. **Report No FDD For WIN 95** - Enables to release IRQ6 under when the floppy drive in CMOS Setup to NONE. When we select Yes". BIOS reports the information to Windows 95 when no floppy drive is installed. The Choices : Yes, NO

20. **Video BIOS Shadow**
Enables the system Shadowing and achieve the best performance of the system.
The Choices : Enabled, Disabled

21. **C8000-CBFFF, CC000-CFFFF, D0000-D3FFF, D4000-D7FFF, D8000-DBFFF, DC000-DFFFF Shadow** - If you have a shadowing of the BIOS at any of the above segments, you may set the appropriate memory shadowable function to "Enabled". Otherwise, select "Disabled". The Choices : Enabled, Disabled

3.4 Chipset Features Setup

ROM PCI/ISA BIOS (CB641XBX)
CHIPSET FEATURES SETUP
AWARD SOFTWARE, INC.

Auto Configuration	: Enabled	CPU Warning Temperature	: 56℃/133℉
EDO DRAM Speed Selection	: 60ns	Current CPU Temperature	: 43℃/109℉
EDO CASx# MA wait State	: 2	Current System Temp.	: 44℃/111℉
EDO RASx# Wait State	: 2	Current CPU FAN Speed	: 4963 RPM
SDRAM CAS latency Time	: 3	Current SMPS FAN Speed	: 0 RPM
DRAM Data Integrity mode	: Non-ECC	CPU Core Voltage	: 2.00V
System BIOS Cacheable	: Enabled	CPU GTL+ Voltage(1.5V)	: 1.48V
Video BIOS Cacheable	: Enabled	Logic Voltage(3.3V)	: 3.37V
8 Bit I/O Recovery Time	: 1	Logic Voltage(5.0V)	: 5.08V
16 Bit I/O Recovery Time	: 1	SMPS Voltage(12V)	: 12.52V
Memory Hole At 15M-16M	: Disabled	SMPS Voltage(-12V)	: -12.34V
Passive Release	: Enabled	SMPS Voltage(-5.0V)	: -4.99V
Delayed Transaction	: Enabled		
AGP Aperture Size(MB)	: 64		
		ESC : Quit ↑ ↓ → ← : Select Item	
		F1 : Help PU/PD/+/- : Modify	
		F5 : Old Values (Shift)F2 : Color	
		F6 : Load BIOS Defaults	
		F7 : Load Setup Defaults	

Figure 3-4 Chipset Features Setup Screen

1. Auto Configuration

This item allows you selects pre-determined optimal values of chipset parameters. When Disabled, chipset parameters revert to setup information stored in CMOS. Many fields in this screen are not available when Auto Configuration is Enabled.

The Choices : Enabled, Disabled.

Note : When this item is enabled, the pre-defined items will become SHOW-ONLY.

2. EDO DRAM Speed Selection

The DRAM timing is controlled by the DRAM Timing Registers. The timings programmed into this register are dependent on the system design. Slower rates may be required in certain system designs to support loose layouts or slower memory.

50ns	DRAM Timing Type.
60ns	DRAM Timing Type.

3. EDO CASx# MA Wait State

You could select the timing control type of EDO DRAM CAS MA (memory address bus).

The Choices : 1,2.

4. EDO RASx# Wait State

You could select the timing control type of EDO DRAM RAS MA (memory address bus).

The Choices : 1,2.

5. SDRAM CAS Latency Time

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

The Choices : 2,3.

6.DRAM Data Integrity Mode

Select Parity or ECC (error-correcting code), according to the type of installed DRAM.

The Choices : Non-ECC,ECC

7. System BIOS Cacheable

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

8. Video BIOS Cacheable

Selecting "Enabled" allows caching of the video BIOS ROM at C0000h-C7FFFFh, resulting in better system performance. Howeverm, if any program writes to this memory area, a system error may result. The choices : Enabled, Disabled.

9. 8 Bit I/O Recovery Time

The recovery time is the length of time, measured in CPU clocks, which the system will delay after the completion of an input/output request. This delay takes place because the CPU is operating so much faster than the input/output bus that the CPU must be delayed to allow for the completion of the I/O.

This item allows you to determine the recovery time allowed for 16 bit I/O. Choices are from NA,1 to 8 CPU clocks.

10. 16 Bit I/O Recovery Time

This item allows you to determine the recovery time allowed for 16 bit I/O. Choices are from NA, 1 to 4 CPU clocks.

11. Memory Hole at 15M-16M

You can reserve this area of system memory for ISA adapter ROM. When this area is reserved, it cannot be cached. The user information of peripherals that need to use thid area of system memory usually discusses their memory requirements.
The Choices : Enabled, Disabled.

12. Passive Release

When Enabled, CPU to PCI bus accesses are allowed during passive release.
Otherwise, the arbiter only accepts another PCI master access to local DRAM.
The Choices : Enabled, Disabled

13. Delayed Transaction

The chipset has an embedded 32-bit posted write buffer to support delay transactions cycles. Select Enabled to support compliance with PCI specification version 2.1.
The Choices : Enabled, Disabled.

14. AGP Aperture Size

Select the size of the Accelerated Graphics Port(AGP) aperture. The aperture is a portion of the PCI memory address range dedicated for graphics memory address space. Host cycles that hit the aperture range are forwarded to the AGP without any translation. See www.agpforum.org for AGP information.
The choices : 4M, 8M, 16M, 32M, 64M, 128M, 256M.

15. CPU Warning Temperature

When set the temperature, CPU automatically downs the clock for cooling the CPU, if the temperature of CPU meets the predefined temperature.

16. Current CPU Temperature

This item shows current CPU temperature. Note that this item is SHOW-ONLY.

17. Current System Temp.

This item shows current System temperature. Note that this item is SHOW-ONLY.

18. Current CPU FAN Speed / Current SMPS FAN Speed

These items show current states of FAN speed. Note that this item is SHOW-ONLY.

19. CPU Core Voltage / CPU GTL+Voltage(1.5V)

These items show voltage states of CPU. Note that this item is SHOW-ONLY.

20. Logic Voltage(3.3V) / Logic Voltage(5.0V) / SMPS Voltage(12V) / SMPS Voltage(-12V) / SMPS Voltage(-5.0V)

These items show voltage states of system power. Note that this item is SHOW-ONLY.

♣ Above items(No.15-20) will be shown only the thermal/hardware detection circuits are installed.

3.5 Power Management Setup

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

ROM PCI/ISA BIOS (CB641XBX)
POWER MANAGEMENT SETUP
AWARD SOFTWARE, INC.

Power Management	: User Define	** Reload Global Timer Events **	
PM Control by APM	: Yes	IRQ [3-7, 9-15], NMI	: Disabled
Video Off Method	: DPMS	Primary IDE 0	: Enabled
Video Off After	: Standby	Primary IDE 1	: Enabled
Modem Use IRQ	: 3	Secondary IDE 0	: Enabled
		Secondary IDE 1	: Enabled
Doze Mode	: 4 Min	Floppy Disk	: Enabled
Standby Mode	: 8 Min	Serial Port	: Enabled
Suspend Mode	: 12 Min	Parallel Port	: Enabled
HDD Power Down	: Disable	PME Function	: Disabled
Throttle Duty Cycle	: 62.5%		
VGA Active Monitor	: Enabled		
Soft-Off by PWR-BTTN	: Delay 4 Sec.		
CPUFAN off In Suspend	: Enabled		
Resume by Ring	: Disabled		
Resume by Alarm	: Disabled	ESC : Quit ↑ ↓ → ← : Select Item	
		F1 : Help PU/PD/+/- : Modify	
Wake On LAN	: Disabled	F5 : Old Values (Shift)F2 : Color	
IRQ 8 Break Suspend	: Disabled	F6 : Load Bios Defaults	
		F7 : Load Setup Defaults	

Figure 3-5 Power Management Setup Screen

1. Power Management

This option allows you to select the type (or degree) of power saving for Doze, Standby, and Suspend modes. See the section PM Timers for brief description of each mode.

There are four selections for Power Management. three of which have fixed mode settings.

Disable	No power management. Disables all four modes
Min. Power Saving	Minimum power management. Doze Mode = 1Hour Standby Mode = 1Hour., Suspend Mode = 1Hour., and HDD Power Down = 15min.
Max. Power Saving	Maximum power management — ONLY AVAILABLE FOR SL CPU' S. Doze Mode = 1min., Standby Mode = 1min., Suspend Mode = 1min., and HDD Power Down = 1min.
User Defined	Allows you to set each mode individually. When not disabled, each of the ranges are from 1 min. to 1 Hour. except for HDD Power Down which ranges from 1min. to 15 min. and disable.

2. PM Control by APM

When enabled, an Advanced Power Management device will be activated to enhance the Max. Power Saving mode and stop the CPU internal clock. if Avance Power Management (APM) is installed on your system, selecting Yes gives better power savings.

3. Video Off Method

This determines the manner in which the monitor is blanked.

V/H SYNC+Blank	This selection will cause the system to turn off the vertical and horizontal synchronization ports and write blanks to the video buffer.
Blank Screen	This option only writes blanks to the video buffer.
DPMS	Select this option if your monitor supports the Display Power Management Signaling(DMPS) standard of the Video Electronics Standards to select video power management values.

4. Video Off After

When enabled, this feature allows the VGA adapter to operate in a power saving mode.

N/A	Monitor will remain on during power saving modes.
Suspend	Monitor blanked when the system enters the Suspend mode.
Standby	Monitor blanked when the system enters Standby mode.
Doze	Monitor blanked when the system enters any power saving mode.

5. MODEM Use IRQ

Name the interrupt request (IRQ) line assigned to the modem (if any) on your system. Activity of the selected IRQ awakens the system.
The choices : 3,4,5,7,9,10,11,NA.

6. Doze Mode

When enabled and after the set time of system inactivity, system enters Doze Mode. When enabled and after the set time of system inactivity, the CPU clock will run at slower speed while all other devices still operate at full speed.

7. Standby Mode

When "Enabled" and after the set time of system inactivity, system enters Standy Mode. When "Enabled" and after the set time of system inactivity, the CPU clock will run at slower speed while all other devices still operate at full speed.

8. Suspend Mode

When "Enabled" and after the set time of system inactivity, system enters Suspend Mode.

9. HDD Power Down

This shuts down IDE hard disks that support a power saving modes sfter a specified period of time. The settings range from 1 to 15 minutes and can be set manually when power management is in User Define mode. This item does not affect SCSI hard disks.

10. Throttle Duty Cycle

When the system enters Doze mode, the CPU clock runs only part of the time.
You may select the percent of time that the clock runs.
The Choices : 12.5%,25.0%, 37.5%, 50.0%, 62.5%, 75.0%

11. VGA Active Monitor

When Enabled, any video activity restarts the global timer for Standby mode.
The Choices : Enabled, Disabled.

12. Soft - Off by PWR-BTTN

When Enabled, turning the system off with the on/off button places the system in a very low-power-usage state, with only enough circuitry receiving power to detect power button activity or Resume by Ring activity.
The Choices : Enabled, Disabled.

13. CPUFAN Off In Suspend

Turns off CPU fan while in suspend mode.
The Choices : Enabled, Disabled.

14. Resume by Ring

An input signal on the serial Ring Indicator (RI) line (in other words, an incoming call on the modem) awakens the system a soft off state...
The Choices : Enabled, Disabled.

15. Resume by Alarm

Sets to wake up/resume from suspend-off state by alarm interrupt. "Disabled" is a default. Select "Enabled" to enter resume/wake up date, and times.
The Choices : Enabled, Disabled.

16. Wake On LAN

Sets to turn on the system from power off state by network.
The Choices : Enabled, Disabled.

17. IRQ & Break Suspend

You can disable monitoring of IRQ8 so it does not awaken the system from Suspend mode.
The Choices : Enabled, Disabled.

18. IRQ[3-7, 9-15], NMI

IRQ'S (Interrupt requests) 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. As above, the choices are "Enabled" and "Disabled". When set any IRQ item to "Enabled", Enabled IRQ events occurring at device(s) will awaken a system which has been powered down. The choices : Enabled, Disabled

19. Primary IDE 0 / Primary IDE 1 / Secondary IDE 0 / Secondary IDE 1

When set to "Enabled", any event occurring at a HDD will awaken a system which has been powered down.

20. Floppy Disk

When set to "Enabled", any event occurring at floppy disk will awaken a system which has been powered down.

21. Serial Ports

When set to "Enabled", any event occurring at serial port will awaken a system which has been powered down.

22. Parallel Ports Activity

When set to "Enabled", any event occurring at a parallel port will awaken a system which has been powered down.

23. PME Function

When set to "Enabled", network or any events will awaken a system which has been powered down.

3.6 PNP/PCI Configuration Setup

This section describes configuring the PCI bus system. PCI (or Personal Computer Interconnect) is a system which allows I/O devices to operate at speeds nearing the speed the CPU itself uses when communicating with its own specal components. This section covers some very technical items and it is strongly recommended that only experienced users should make any changes to the default settings.

ROM PCI/ISA BIOS (CB641XBX)
PNP/PCI CONFIGURATION
AWARD SOFTWARE, INC

PNP OS Installed : Yes Resources Controlled By : Auto Reset Configuration Data : Disabled	
	ESC : Quit ↑ ↓ → ← : Select Item F1 : Help UP/DN/+/- : Modify F5 : Old Values (Shift) F2 : Color F6 : Load Bios Defaults F7: Load Setup Defaults

Figure 3-6 PNP/PCI Configuration Setup Screen

1. PNP OS Installed

If you plan to use an operating system that supports Plug and Play, you should set this line to "Yes". When this line is set to set to "Yes", the BIOS will only initialize PnP PCI card boot devices.

Any other PnP PCI cards are initialized by the OS. not change the default setting if your OS does not support Plug and Play. The choices : Yes/No

2. Resource controlled by

The Award Plug and Play BIOS has the capacity to automatically configure all of the boot and Plug and Play compatible devices. However, this capability means absolutely nothing unless you are using a Plug and Play operating system such as Windows® 95.

When this line is set to "Auto", the BIOS will automatically configure IRQ and DMA resources. This is the recommended setting. If you set this line to "Manual", the screen changes as shown above and allows manual configuration. In general you should only need to this if you are installing an ISA card that requires manual configuration. The choices : Auto, Manual.

3. Reset Configuration Data

Normally, you leave this field "Disabled". If you need to clear Extended System Configuration (ESCD), set this to "Enabled". The ESCD data will clear automatically and the BIOS will reset this item to "Disabled" setting. Use this item If you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the operating system can not boot. The choices : Enabled, Disabled.

3-7. Load BIOS Defaults

In the event of a loss in memory on the configuration SETUP, the user can restore the information on the BIOS by default values. This settings are not optimal and turn off all the performance features. Loading the BIOS defaults provides safety booting of the system.

3-8. Load SETUP Defaults

SETUP defaults are considered default values with which the system will be enabled to perform better. This due to the enabling of some options within the SETUP program. However, if problems are encountered after loading the Setup Default Settings, reboot the system and load the BIOS defaults instead.

3-9. INTEGRATED PERIPHERALS

ROM PCI/ISA BIOS (CB641XBX)
INTEGRATED PERIPHERALS
AWARD SOFTWARE, INC.

IDE HDD Block Mode	: Disabled	
IDE Primary Master PIO	: Auto	
IDE Primary Slave PIO	: Auto	
IDE Secondary Master PIO	: Auto	
IDE Secondary Slave PIO	: Auto	
IDE Primary Master UDMA	: Auto	
IDE Primary Slave UDMA	: Auto	
IDE Secondary Master UDMA	: Auto	
IDE Secondary Slave UDMA	: Auto	
On-Chip Primary PCI IDE	: Enabled	
On-Chip Secondary PCI IDE	: Enabled	
USB Keyboard Support	: Disabled	
OnBoard FDC Controller	: Enabled	
Onboard Serial Port 1	: 3F8/IRQ4	
Onboard Serial Port 2	: 2F8/IRQ3	ESC : Quit ↑ ↓ →← : Select Item
UR2 Mode	: Standard	F1 : Help UP/DN/+/- : Modify
		F5 : Old Values (Shift) F2 : Color
OnBoard Parallel Port	: 378/IRQ7	F6 : Load Bios Defaults
Parallel Port Mode	: SPP	F7 : Load Setup Defaults

Figure 3-7 Integrated Peripheral Setup Screen

1. IDE HDD Block Mode

This allows your hard disk controller to use the fast block mode to transfer data to and from your hard disk drive (HDD).

Enabled	IDE controller uses block mode.
Disabled	IDE controller uses standard mode.

2. IDE Primary/Secondary Master/Slave PIO

The four IDE PIO (Programmed Input/Output) fields let you set a PIO mode (0-4) for each of the four IDE devices that the onboard IDE interface supports. Modes 0 through 4 provide successively increased performance. In Auto mode, the system automatically determines the best mode for each device.

3. IDE Primary/Secondary Master/Slave UDMA

Ultra DMA/33 implementation is possible only if your IDE hard drive supports it and the operating environment includes a DMA driver (Windows 95 OSR2 or a third-party IDE bus master driver). If your hard drive and your system both support Ultra DMA/33, select Auto to enable BIOS support.
The choices : Auto, Disabled.

4. On-Chip Primary / Secondary PCI IDE

The integrated peripheral controller contains an IDE interface with support for two IDE channels. Select Enabled to activate each channel separately.

5. USB Keyboard Support

Select Enabled if your system contains a Universal Seral Bus (USB) controller and you have a USB keyboard.
The choices : Enabled, Disabled.

6. Onboard FDC Controller

This should be enabled if your system has a floppy disk drive (FDD) installed on the system board and you wish to use it. Even when so equipped, if you a higher performance controller, you will need to disable this feature.
The choices : Enabled, Disabled.

7. Onboard Serial Port 1/ Port 2

This item allows you to determine access onboard sertial Port 1/ Port 2 controller with which I/O address. The choices : 3F8/IRQ4, 238/IRQ3,3E8/IRQ4, 2F8/IRQ3, Disabled, Auto.

8. UR2 Mode

This item allows you to determine which Infra Red (IR) function of onboard I/O chip.
The choices : Standard, IrDA 1.0, ASK IR.

9. Onboard Parallel Port

Select a logical LPT port name and matching address dor the physical parallel (printer) port.
The choices : 378H/IRQ7, 278H/IRQ5, 3BCH/IRQ7, Disabled

10. Parallel Port Mode

Select an operating mode for the onboard parallel port. Select Compatible or Extended unless you are certain both your hardware and software support EPP or ECP mode.
The choices : SPP, EPP, ECP, ECP+EPP.

3-10. SUPERVISOR PASSWORD

The SUPERVISOR PASSWORD utility allows you to set, change, and disable the password which is stored in the BIOS. To change the password setting, press 〈Enter〉 on the SUPERVISOR PASSWORD option of the main menu and then type the new password.

Configure the Security Option within the BIOS Features Setup corresponding to the setting in this utility. SUPERVISOR PASSWORD access right is higher than USER PASSWORD.

The password can be at most 8 characters long. The program will require you to confirm the new password before it exits and enables the utility. To disable the SUPERVISOR PASSWORD, press the 〈F1〉 when the program asks you to enter the new password.

3-11. USER PASSWORD

USER PASSWORD only can be used when the system is booting. Users only can enter SETUP screen to change the USER PASSWORD.

The password can be at most 8 characters long. The program will require you to confirm the new password before it exits and enables the utility. To disable the USER PASSWORD, press the 〈F1〉 as the program asks you to enter the new password.

3-12. IDE Auto Detection

The IDE HDD Auto Detection provides auto configuration of the haed drive installed in the system. It supports LBA, Large, and Normal modes. If the system's hard disk drive has a capacity of over 528MB and supports LBA functions, you may enable either the LBA mode or the Large mode. On the other hand, if the hard disk drive's capacity is over 528MB but does support LBA functions, you may enable the Large mode in order to use over 528MB.

ROM PCI/ISA BIOS
HDD AUTO DETECTION
AWARD SOFTWARE, INC

HDD DISKS	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
Primary Master :								

Select Primary Master Option (N=Skip) : N

OPTIONS	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
2(Y)	1674	811	64	0	3243	63	LBA
1	1674	3244	16	65535	3243	63	NORMAL
3	1674	811	64	65535	3243	63	LARGE

Note : Some OSes (like SCO-UNIX) must use "NORMAL" for Installation

ESC : Skip

Figure 3-8 IDE HDD Auto Detection Screen

- a. The LBA and Large modes will only appear on the screen when the installed hard disk drive is specified to support the LBA mode.

- b. In the case when a hard disk drive's cylinder specification exceeds 1024, and does not support the LBA functions, only the Large mode will be displayed on the screen.

- c. With a hard disk drive supporting cylinders below 1024, only the Normal mode will appear on the screen. The Normal mode will also be shown on the screen under conditions a & b above.

- d. Hard disk drives with less than 528MB total capacity must be set to Normal mode when combined with either old BIOS versions or the Award BIOS. LBA and Large modes are new specifications which may not be fully supported by all operating systems. An example of which is the current version of UNIX System (R3.2.4) which is still unable to support the LBA function. Therefore, determine the specifications of your hard disk drive and operating system before selecting the drive's mode.

After pressing the 〈Enter〉 key on this item of the main menu, the display screen will show the following screen.

Once the program detects the type of hard disk installed, it will display the relative information such as the type, cylinders, heads, write pre-compensation, landing zone, number of sectors per track, size and mode. A message asking you to accept the IDE HDD detected will also be flashed on the screen.

3-13. Quitting SETUP

After making all modifications in the SETUP program, go to the option "Save & Exit SETUP" then press the 〈Enter〉 key. The program will display the following screen.

Press 〈Y〉 to confirm the changes made, and the 〈N〉 or the 〈Esc〉 keys if further modifications are sill necessary before exiting the SETUP program. Once the 〈Y〉 key in pressed, the system will automatically exit the program and reboot.
However, if you want cancel all changes made under the SETUP program, go to the options "Exit Without Saving", press 〈Y〉 and the system will exit the SETUP program then reboot without saving any of the changes made. You may also use the 〈F10〉 key to save the new settings.