

MPC-6800

Intel® Ultra Low Voltage

Celeron® Processors

Media PC

With Giga LAN, DDR, AGP 8X,

USB2.0, 6CH Audio, E-DOM

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Packing List

Before you begin installing the board, please make sure that the following materials have been shipped:

- 1 MPC-6800 CPU Board
- 1 ATA 100 cable
- 4 Serial Port cable
- 1 Jumper cap
- 1 5.1 channel audio cable
- 1 TV out cable
- 1 CompactFlash Card Cover
- 1 Quick Installation Guide
- 1 CD-ROM for manual (in PDF format) and drivers

If any of these items should be missing or damaged, please contact your distributor or sales representative immediately.

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Chapter

1

**General
Information**

1.1 Introduction

AAEON debuts our newest compact media single board computer offering AGP 8X, TV-Output and Intel Ultra low power processor. This compact sized single board computer features a new level of multimedia performance.

This single board computer incorporates the AGP 8X VGA interface with S3 Uni Chrome Graphics. Our first media PC that supports up to 64 MB of shared display memory. Throughout our R&D goal was to offer our customers a higher quality visual displays platform.

The Ethernet interface is controlled by the newest RTL8110S Gigabit Ethernet controller that can allow users surf on the unprecedented high-speed Internet. Our surrounding sound effect quality audio interface is controlled by the Realtek ALC 65X chipset with 6 channels speakers and S/PDIF.

Central Processing Units can support the latest Intel ULV and Celeron processor. Meanwhile, the low voltage version is optional for user to purchase. The low voltage version allows you operate the system in the most tough environment with the stiff conditions and no worries at all on the system stability.

The board support CRT and LCD function that either the same displays or different displays can be shown on LCD and CRT monitors. The maximum resolution is up to 1600 x 1200 true color. High quality Graphic second-generation technology from S3 Uni Chrome enhances the visual performance 2D as well as 3D largely and widely. Besides, there is an onboard touchscreen controller attached for supporting most 4/5/8 wires resistance touchscreen panel in the market.

1.2 Features

- Onboard Intel® Ultra Low Voltage Processor – ULV Celeron®400/650 MHz (Tulatin Core – L2 cache = 256K)
- Support DDR266 Memory up to 1024MB (1GB)
- Support dual channel LVDS panel (TTL optional), CRT and LCD can display different view under Windows XP.
- Total 6 serial ports (included IrDA and touchscreen)
- Support hot swapping CompactFlash, read / write rate up to 48MB/Sec
- Support 4 / 5 / 8 wire resistive touchscreen panel (3M / ELO / others)
- Fanless design, +5V only operation, total board's power consumption under 25W (ULV Celeron®650MHz)
- Support USB 2.0, mini PCI (For wireless LAN) slot, Embedded USB DOM, 6CH Audio, Dual ATA 133 channel, Dual LAN (10/100 and GbE)

1.3 Specifications

System

- CPU: Onboard Intel®Ultra Low Voltage Celeron®400/650MHz CPU
- Memory: 184-pin DDR SDRAM DIMM x 1, Max. 1024 MB (DDR200/266)
- Chipset: VIA CLE266 + VIA 8235
- I/O Chipset: ITE 8705F + Fintek F81216D
- Ethernet: Realtek 8100BL 10/100Base-Tx, Realtek 8100C 10/100Base-Tx or Realtek 8110S
10/100/1000Base-Tx, RJ-45 connector x 2
- BIOS: AWARD 512KB FLASH ROM
- Watchdog Timer: Generate a time-out system reset
- H/W Status Monitoring: Support power supply voltages, fan speed and temperatures monitoring
- SSD: Type II CompactFlash slot x 1 (Support Hot Swap)
- Expansion Interface: Mini PCI socket x 1, PCI slot x 1
- Battery: Lithium battery
- Power Requirement: +5V

- Board Size 7.95”(L) x 6.4”(W)
(202mm x 163mm)
- Gross Weight: 1.2lb (0.5kg)
- Operating Temperature: 32 F~140 F (0 C~60 C)

Display

Support CRT and LCD simultaneous/Independent display

- Chipset VIA CLE266
- Memory: Shared system memory up to 64 MB
- Resolutions: Up to 1600 X 1200 @ 32bpp colors for CRT;
Up to 1280 X 1024 @ 24 bpp colors for LCD
- LCD Interface: Up to 36-bit dual channel LVDS TFT LCD

I/O

- MIO: EIDE x 2(UDMA133 x 2), FDD x 1, KB x 1, Mouse x 1, RS-232 x 5, RS-232/422/485 x 1, Parallel x 1
- Audio: Realtek ALC650 6CH AC97 Codec, Mic In / Line In / Line Out / CD-In S/P DIF In / Out, Stereo

- Digital I/O: Amplifier included
8 bit Digital I/O (4 in + 4 out)
- IrDA: One IrDA Tx/Rx header
- USB: Two Type-A (dual) connector
support 4 USB 2.0 ports (External)
One 5 x 2 pin header supports 2
USB 2.0 ports (Internal),
One 9 x 2 pin header supports an
embedded USB DOM socket

Notice:

Embedded USB DOM Interface share with RJUSB2. Please don't plug device on it when you will use E-USB DOM. This board only supports PXE boot from LAN function. If you need RPL boot rom, please kindly contact us.

Chapter

2

Quick Installation Guide

Notice:

The Quick Installation Guide is derived from Chapter 2 of user manual. For other chapters and further installation instructions, please refer to the user manual CD-ROM that came with the product.



2.1 Safety Precautions

Warning!

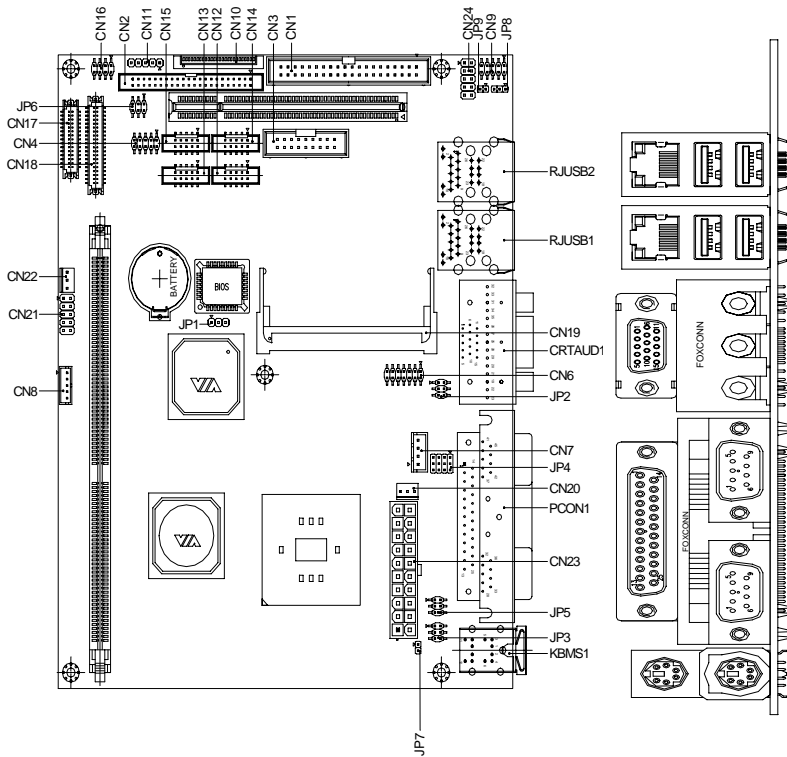
Always completely disconnect the power cord from your board whenever you are working on it. Do not make connections while the power is on, because a sudden rush of power can damage sensitive electronic components.

Caution!

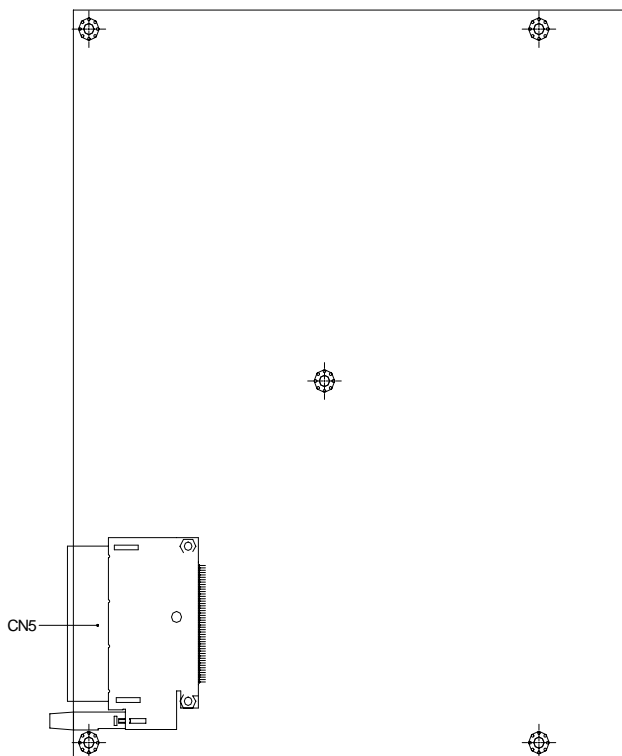
Always ground yourself to remove any static charge before touching the board. Modern electronic devices are very sensitive to static electric charges. Use a grounding wrist strap at all times. Place all electronic components on a static-dissipative surface or in a static-shielded bag when they are not in the chassis

2.2 Location of Connectors and Jumpers

Component Side

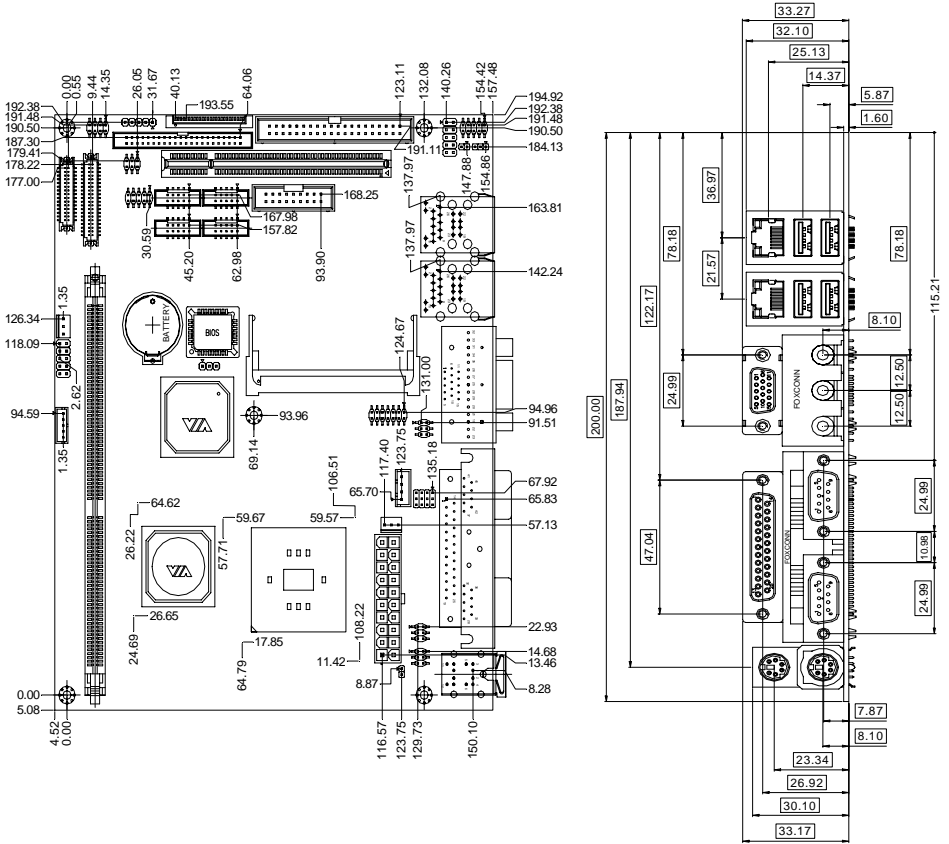


Solder Side

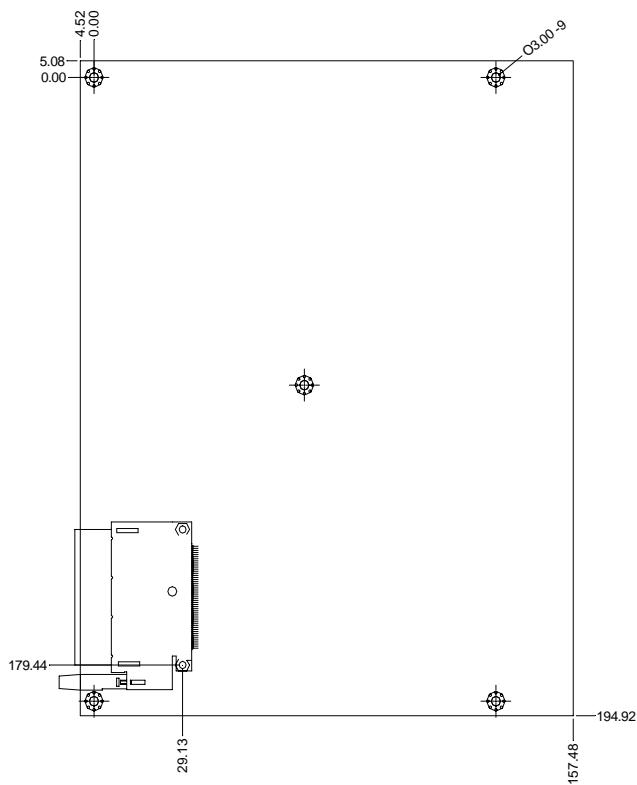


2.3 Mechanical Drawing

Component Side



Solder Side



2.4 List of Jumpers

The board has a number of jumpers that allow you to configure your system to suit your application.

The table below shows the function of each of the board's jumpers:

Jumpers

Label	Function
JP1	Clear CMOS
JP2	Audio Out Select
JP3	COM2 Ring/+5V/+12V Selection
JP4	COM2 RS-232/422/485 Selection
JP5	COM2 RS-232/422/485 Selection
JP6	TFT LCD Clock and Voltage Selection
JP7 & JP9	ATX Power simulate AT Power
JP8	Touch Screen Cable Selection

2.5 List of Connectors

The board has a number of connectors that allow you to configure your system to suit your application. The table below shows the function of each board's connectors:

Connectors

Label	Function
CN1	Primary IDE HDD Connector
CN2	Secondary IDE HDD Connector
CN3	Embedded USB DOM Connector
CN4	USB 3 Connector (Optional)
CN5	CompactFlash Socket
CN6	Audio 5.1 Channel / SP DIF Connector
CN7	CD IN
CN8	Option PME Connector
CN9	8bit Digital I/O Connector
CN10	Slim Floppy Connector
CN11	IrDA Connector
CN12	RS-232 Serial Port COM3 Connector
CN13	RS-232 Serial Port COM4 Connector
CN14	RS-232 Serial Port COM5 Connector
CN15	RS-232 Serial Port COM6 Connector
CN16	TV Out Connector
CN17	LVDS LCD Connector
CN18	TTL LCD Connector (Optional)

CN19	MINI PCI SLOT
CN20	Fan Connector
CN21	Front Panel
CN22	Fan Connector
CN23	ATX Power Connector
CN24	Touch Screen Panel Connector
DIMM1	DIMM Slot
PCI1	PCI Slot
RJUSB1	LAN1 Connector + USB1 Connector
RJUSB2	LAN2 Connector + USB2 Connector
CRTAUD1	CRT + Audio Connector
PCON1	LPT Port + COM1-2 Connector
KBMS1	PS2 Keyboard / Mouse Connector

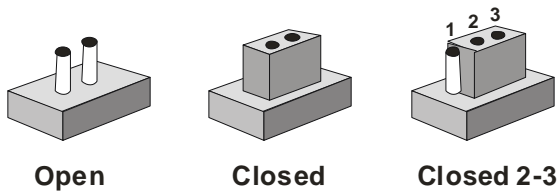
Notice:

CN20 & CN22 FAN Power factory default is +5V output. If you need to use +12V, please kindly contact us.

2.6 Setting Jumpers

You configure your card to match the needs of your application by setting jumpers. A jumper is the simplest kind of electric switch. It consists of two metal pins and a small metal clip (often protected by a plastic cover) that slides over the pins to connect them. To “close” a jumper you connect the pins with the clip.

To “open” a jumper you remove the clip. Sometimes a jumper will have three pins, labeled 1, 2 and 3. In this case you would connect either pins 1 and 2 or 2 and 3.



A pair of needle-nose pliers may be helpful when working with jumpers.

If you have any doubts about the best hardware configuration for your application, contact your local distributor or sales representative before you make any change.

Generally, you simply need a standard cable to make most connections.

2.7 Clear CMOS (JP1)

JP1	Function
1-2	Protected (Default)
2-3	Clear

2.8 Audio Out Selection (JP2)

JP2	Function
3-5, 4-6,	W/ Amplifier (Default)
1-3, 2-4,	W/ O Amplifier

2.9 COM2 Ring/+5V/+12V Selection (JP3)

JP3	Function
1-2	+12V
3-4	+5V
5-6	Ring (Default)

2.10 COM2 RS-232/422/485 Selection (JP4 & JP5)

JP4	JP5	Function
1-2, 4-5, 7-8, 10-11	1-2	RS-232 (Default)
2-3, 5-6, 8-9, 11-12	3-4	RS-422
2-3, 5-6, 8-9, 11-12	5-6	RS-485

2.11 TFT LCD Clock and Voltage Selection (JP6)

JP6	Function
1-3	CLK (Default)
3-5	Reverse CLK
2-4	+5V
4-6	+3.3V (Default)

2.12 ATX Power simulate AT Power (JP7 & JP9)

JP7	JP9	Function
OFF	ON	ATX Power (Default)
ON	OFF	AT Power

2.13 Touch Screen Cable Selection (JP8)

JP8	Function
2-3	5 Wire
1-2	8 Wire (Default)

2.14 Primary IDE Connector (CN1)

Pin	Signal	Pin	Signal
1	IDE RESET	2	GND
3	DATA7	4	DATA8
5	DATA6	6	DATA9
7	DATA5	8	DATA10
9	DATA4	10	DATA11
11	DATA3	12	DATA12
13	DATA2	14	DATA13
15	DATA1	16	DATA14
17	DATA0	18	DATA15
19	GND	20	N.C.
21	REQ	22	GND
23	IO WRITE	24	GND
25	IO READ	26	GND
27	IO READY	28	GND
29	DACK	30	GND
31	IRQ14	32	N.C.
33	ADDR1	34	UDMA DETECT
35	ADDR0	36	ADDR2
37	CS#1	38	CS#3
39	LED	40	GND

2.15 Secondary IDE Connector (CN2)

Pin	Signal	Pin	Signal
1	IDE RESET	2	GND
3	DATA7	4	DATA8
5	DATA6	6	DATA9
7	DATA5	8	DATA10
9	DATA4	10	DATA11
11	DATA3	12	DATA12
13	DATA2	14	DATA13
15	DATA1	16	DATA14
17	DATA0	18	DATA15
19	GND	20	N.C.
21	REQ	22	GND
23	IO WRITE	24	GND
25	IO READ	26	GND
27	IO READY	28	GND
29	DACK	30	GND
31	IRQ14	32	N.C.
33	ADDR1	34	UDMA DETECT
35	ADDR0	36	ADDR2
37	CS#1	38	CS#3
39	LED	40	GND
41	+5V	42	+5V
43	GND	44	GND

2.16 Embedded USB DOM Connector (CN3)

Pin	Signal	Pin	Signal
1	GND	2	GND
3	GND	4	GND
5	+5V	6	+5V
7	USBD2-	8	USBD3-
9	USBD2+	10	USBD3+
11	GND	12	GND
13	N.C.	14	N.C.
15	+5V	16	+3.3V
17	GND	18	GND

2.17 USB 3 Connector (CN4) * Optional

Pin	Signal	Pin	Signal
1	+5V	2	GND
3	USBD4-	4	GND
5	USBD4+	6	USBD5+
7	GND	8	USBD5-
9	GND	10	+5V

Note:

This interface shares with CFD. There is no connector in the standard product.

2.18 CompactFlash Socket (CN5)

Pin	Signal	Pin	Signal
1	GND	26	GND
2	DATA3	27	DATA11
3	DATA4	28	DATA12
4	DATA5	29	DATA13
5	DATA6	30	DATA14
6	DATA7	31	DATA15
7	CS#1	32	CS#3
8	GND	33	GND
9	GND	34	IO READ
10	GND	35	IO WRITE
11	GND	36	+5V
12	GND	37	IRQ15
13	+5V	38	+5V
14	GND	39	CSEL
15	GND	40	N.C.
16	GND	41	IDE RESET
17	GND	42	IO READY
18	ADDR2	43	N.C.
19	ADDR1	44	+5V
20	ADDR0	45	DASP
21	DATA0	46	DIAG
22	DATA1	47	DATA8
23	DATA2	48	DATA9
24	N.C.	49	DATA10
25	GND	50	GND

2.19 Audio 5.1 Channel / SP DIF Connector (CN6)

Pin	Signal	Pin	Signal
1	Front-OUT-R	2	GND
3	Front-OUT-L	4	GND
5	Surr-OUT-R	6	GND
7	Surr-OUT-L	8	GND
9	LFE-OUT	10	GND
11	CNE-OUT	12	GND
13	SPDIF-OUT	14	SPDIF-IN

2.20 CD IN Connector (CN7)

Pin	Signal	Pin	Signal
1	CD_Left	2	GND
3	GND	4	CD_Right

2.21 Option PME Connector (CN8)

Pin	Signal	Pin	Signal
1	+5VSB	2	GND
3	#PME	4	SMB_DATA
5	SMB_CLK		

2.22 8bit Digital I/O Connector (CN9)

This connector offers 4-pair of digital I/O functions and address is 803H. The pin definitions are illustrated below:

Pin	Signal	Pin	Signal
1	GP40	2	GP41
3	GP42	4	GP43
5	GP44	6	GP45
7	GP46	8	GP47
9	+5V	10	GND

The pin definitions and registers mapping are illustrated below:

Address: **803H**

	Pin1	Pin2	Pin3	Pin4	Pin5	Pin6	Pin7	Pin8
4 IN/4 OUT	IN	IN	IN	IN	OUT	OUT	OUT	OUT
8 IN	IN	IN	IN	IN	IN	IN	IN	IN
8 OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT	OUT
	MSB							LSB

Note:

4 IN /4 OUT, 8 IN, 8 OUT is chosen from BIOS

2.23 Slim Floppy Connector (CN10)

Pin	Signal	Pin	Signal
1	+5V	2	INDEX
3	+5V	4	DRIVE SELCET A
5	+5V	6	DISK CHANGE
7	N.C.	8	N.C.
9	N.C.	10	MOTOR A
11	N.C.	12	DIR
13	DS1	14	STEP
15	GND	16	WRITE DATA
17	GND	18	WRITE GATE
19	GND	20	TRACK0
21	GND	22	WRITE PROTECT
23	GND	24	READ DATA
25	GND	26	SIDE1

2.24 IrDA Connector (CN11)

Pin	Signal
1	+5V
2	N.C.
3	IRRX
4	GND
5	IRTX

2.25 RS-232 Serial Port COM3~6 Connector (CN12 ~ CN15)

Pin	Signal	Pin	Signal
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI	10	N.C.

2.26 TV Out Connector (CN16)

Pin	Signal	Pin	Signal
1	Y	2	CVBS
3	GND	4	GND
5	C	6	N.C.
7	GND	8	N.C.

2.27 LVDS Connector (CN17)

Pin	Signal	Pin	Signal
1	N.C.	2	ENBKL
3	PVCC	4	GND
5	LVDS_TXCLK1-	6	LVDS_TXCLK1+
7	PVCC	8	GND
9	LVDS_TX0-	10	LVDS_TX0+
11	LVDS_TX1-	12	LVDS_TX1+
13	LVDS_TX2-	14	LVDS_TX2+
15	LVDS_TX3-	16	LVDS_TX3+
17	LVDS_SPD	18	LVDS_SPC
19	LVDS_TX4-	20	LVDS_TX4+
21	LVDS_TX5-	22	LVDS_TX5+
23	LVDS_TX6-	24	LVDS_TX6+
25	LVDS_TX7-	26	LVDS_TX7+
27	PVCC	28	GND
29	LVDS_TXCLK2-	30	LVDS_TXCLK2+

2.28 TFT LCD Connector (CN18) * Optional Connector

Pin	Signal	Pin	Signal
1	+5V	2	+5V
3	GND	4	GND
5	+3.3V	6	+3.3V
7	ENBKL	8	GND
9	BLUE0	10	BLUE1
11	BLUE2	12	BLUE3
13	BLUE4	14	BLUE5
15	BLUE6	16	BLUE7

Media PC		MPC-6800	
17	GREEN0	18	GREEN1
19	GREEN2	20	GREEN3
21	GREEN4	22	GREEN5
23	GREEN6	24	GREEN7
25	RED0	26	RED1
27	RED2	28	RED3
29	RED4	30	RED5
31	RED6	32	RED7
33	GND	34	GND
35	DOT_CLOCK	36	VSYNC
37	DE	38	HSYNC
39	N.C.	40	ENAVEE

2.29 FAN Connector (CN20 & CN22)

Pin	Signal
1	GND
2	+5V
3	FAN SPEED SENSE

Note: This connector only provides +5V power.

2.30 Front Panel (CN21)

Pin	Signal	Pin	Signal
1	Power On Button (-)	2	Power On Button (+)
3	IDE LED (-)	4	IDE LED (+)
5	BUZZER (-)	6	+5V
7	EXTSMI (-)	8	EXTSMI (+)
9	Reset Switch (-)	10	Reset Switch (+)

2.31 ATX Power Connector (CN23)

Pin	Signal	Pin	Signal
1	N.C.	11	N.C.
2	N.C.	12	-12V
3	GND	13	GND
4	+5V	14	PS_ON
5	GND	15	GND
6	+5V	16	GND
7	GND	17	GND
8	POWER OK	18	-5V
9	+5VSB	19	+5V
10	+12V	20	+5V

2.32 Touch Screen Connector (CN24)

8 wires

Pin	Signal	Pin	Signal
1	X+	2	X+REF
3	Y+	4	Y+REF
5	NC	6	NC
7	Y-	8	Y-REF
9	X-	10	X-REF

5 wires

Pin	Signal	Pin	Signal
1	UL	2	NC
3	UR	4	NC
5	COM	6	NC
7	LR	8	NC
9	LL	10	NC

Chapter

3

**Award
BIOS Setup**

3.1 System Test and Initialization

These routines test and initialize board hardware. If the routines encounter an error during the tests, you will either hear a few short beeps or see an error message on the screen. There are two kinds of errors: fatal and non-fatal. The system can usually continue the boot up sequence with non-fatal errors. Non-fatal error messages usually appear on the screen along with the following instructions:

Press <F1> to RESUME

Write down the message and press the F1 key to continue the boot up sequence.

System configuration verification

These routines check the current system configuration against the values stored in the CMOS memory. If they do not match, the program outputs an error message. You will then need to run the BIOS setup program to set the configuration information in memory.

There are three situations in which you will need to change the CMOS settings:

1. You are starting your system for the first time
2. You have changed the hardware attached to your system
3. The CMOS memory has lost power and the configuration information has been erased.

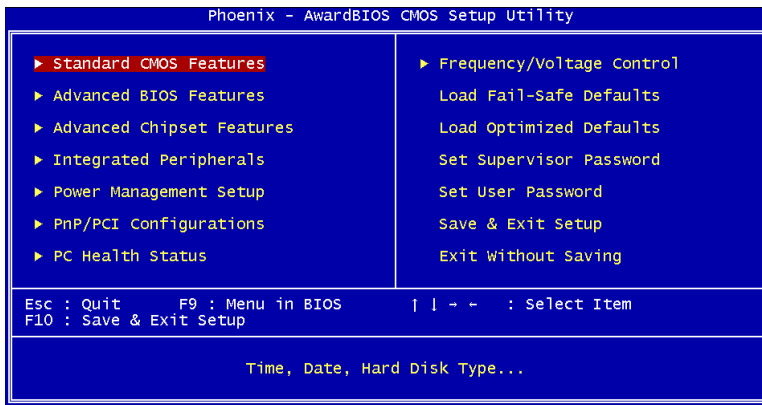
The MPC-6800 CMOS memory has an integral lithium battery backup for data retention. However, you will need to replace the complete unit when it finally runs down.

3.2 Award BIOS Setup

Awards BIOS ROM has a built-in Setup program that allows users to modify the basic system configuration. This type of information is stored in battery-backed CMOS RAM so that it retains the Setup information when the power is turned off.

Entering setup

Power on the computer and press immediately. This will allow you to enter Setup.



Standard CMOS Features

Use this menu for basic system configuration. (Date, time, IDE, etc.)

Advanced BIOS Features

Use this menu to set the advanced features available on your system.

Advanced Chipset Features

Use this menu to change the values in the chipset registers and optimize your system performance.

Integrated Peripherals

Use this menu to specify your settings for integrated peripherals. (Primary slave, secondary slave, keyboard, mouse etc.)

Power Management Setup

Use this menu to specify your settings for power management. (HDD power down, power on by ring, KB wake up, etc.)

PnP/PCI Configurations

This entry appears if your system supports PnP/PCI.

PC Health Status

This menu allows you to set the shutdown temperature for your system.

Frequency/Voltage Control

Use this menu to specify your settings for frequency/ voltage control.

Load Fail-Safe Defaults

Use this menu to load the BIOS default values for the minimal/stable performance for your system to operate.

Load Optimized Defaults

Use this menu to load the BIOS default values that are factory settings for optimal performance system operations. While AWARD has designated the custom BIOS to maximize performance, the factory has the right to change these defaults to meet their needs.

Set Supervisor/User Password

Use this menu to set Supervisor/User Passwords.

Save and Exit Setup

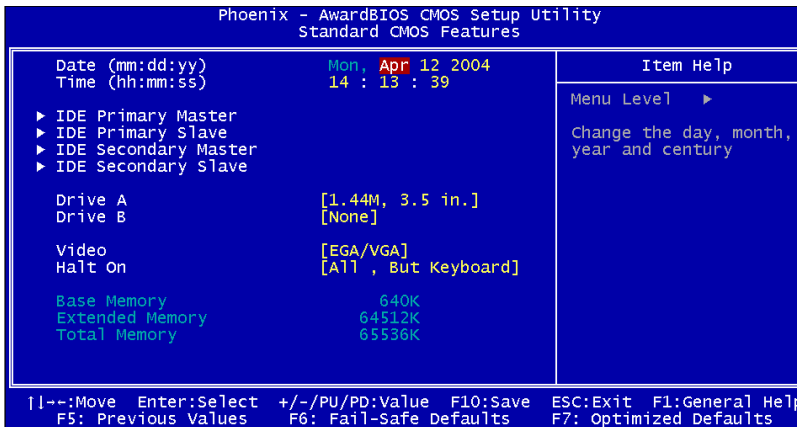
Save CMOS value changes to CMOS and exit setup.

Exit Without Saving

Abandon all CMOS value changes and exit setup.

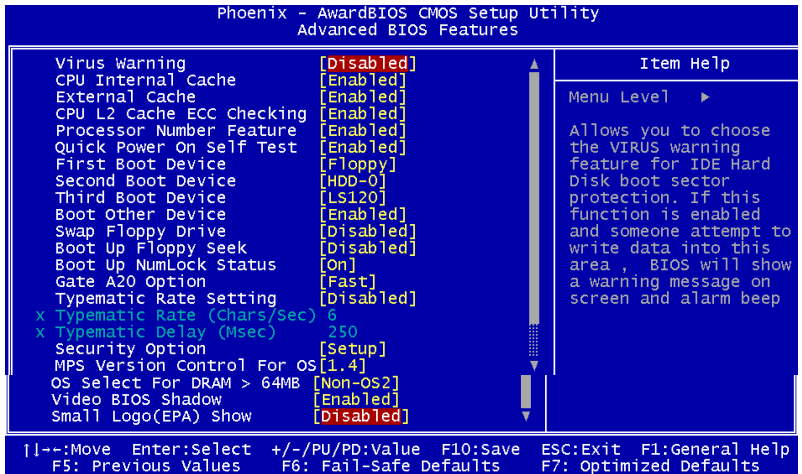
3.3 Standard CMOS Features

When you choose the Standard CMOS Features option from the INITIAL SETUP SCREEN menu, the screen shown below is displayed. This standard Setup Menu allows users to configure system components such as date, time, hard disk drive, floppy drive and display. Once a field is highlighted, on-line help information is displayed in the right box of the Menu screen.



3.4 Advanced BIOS Features

By choosing the Advanced BIOS Features option from the INITIAL SETUP SCREEN menu, the screen below is displayed. This sample screen contains the manufacturer's default values for the MPC-6800

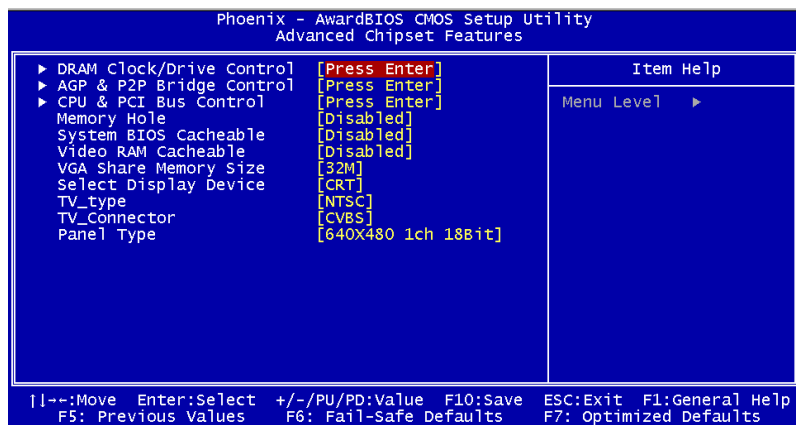


Note:

If you have a CFD plug in the CFD slot, you cannot boot OS from USB-HDD.

3.5 Advanced Chipset Features

By choosing the Advanced Chipset Features option from the INITIAL SETUP SCREEN menu, the screen below is displayed. This sample screen contains the manufacturer's default values for the MPC-6800.



3.6 Integrated Peripherals

By choosing the Integrated Peripherals from the INITIAL SETUP SCREEN menu, the screen below is displayed. This sample screen contains the manufacturer's default values for the MPC-6800.

```

Phoenix - AwardBIOS CMOS Setup Utility
Integrated Peripherals

▶ VIA OnChip IDE Device      [Press Enter]
▶ VIA OnChip PCI Device     [Press Enter]
▶ SuperIO Device            [Press Enter]
  Init Display First        [PCI Slot]
  Onboard Serial Port 3     [3E8/IRQ5]
  Onboard Serial Port 4     [2E8/IRQ7]
  Onboard Serial Port 5     [Disabled]
  Onboard Serial Port 6     [Disabled]
  Serial Port 3 Mode        [Normal]
  Watch Dog Timer Unit      [Minutes]
  Watch Dog Timer           [ 0]
  GPIO PORT 1-4             [Input]
  GPIO PORT 5-8             [Input]
  LAN1                      [Enabled]
  LAN2                      [Enabled]

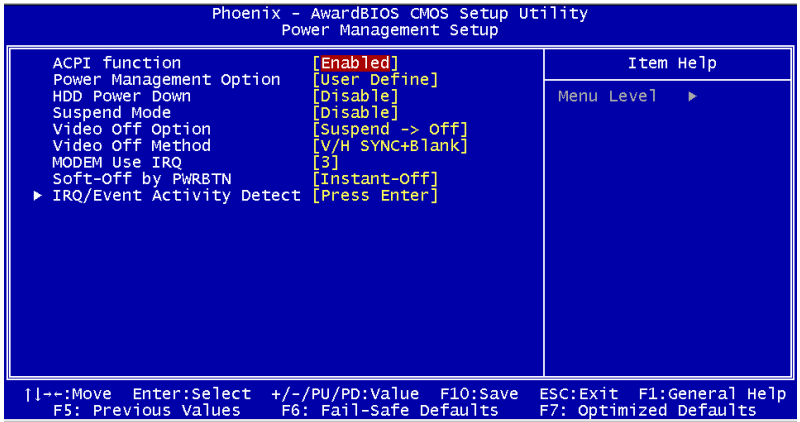
Item Help
Menu Level ▶

[←→]:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

```

3.7 Power management Setup

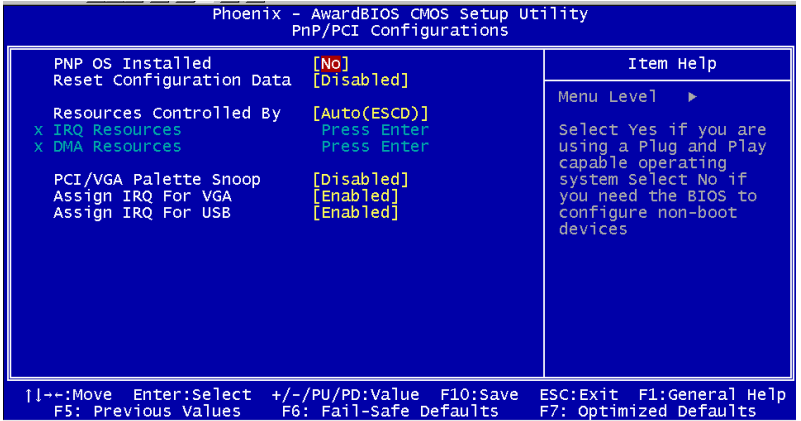
By choosing the Power Management Setup from the INITIAL SETUP SCREEN menu, the screen below is displayed. This sample screen contains the manufacturer's default values for the MPC-6800.



This board cannot support hibernate mode in the operation system.

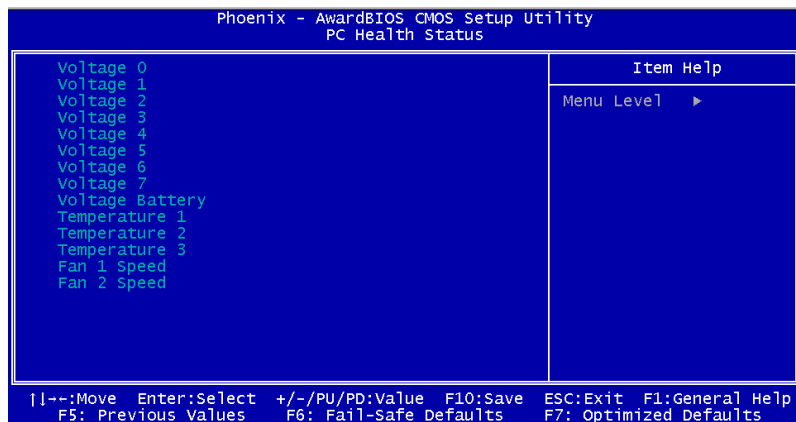
3.8 PnP/PCI configuration

By choosing the PnP/PCI configurations from the Initial Setup Screen menu, the screen below is displayed. This sample screen contains the manufacturer's default values for the MPC-6800.



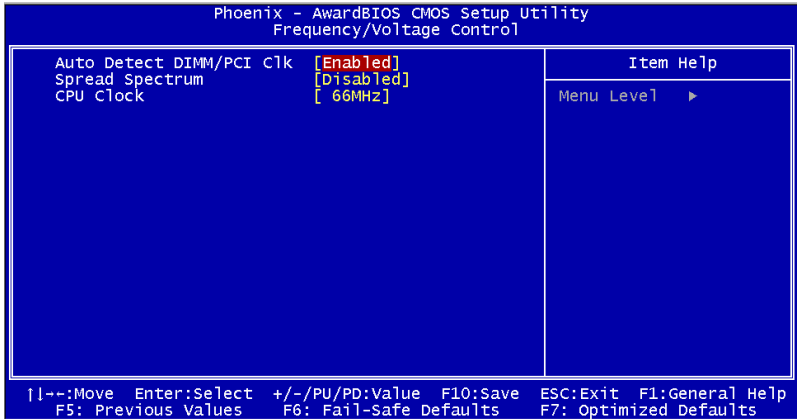
3.9 PC Health Status

By choosing the PC Health Status from the Initial Setup Screen menu, the screen below is displayed. This sample screen contains the manufacturer's default values for the MPC-6800.



3.10 Frequency/Voltage control

By choosing the Frequency/Voltage Control from the Initial Setup Screen menu, the screen below is displayed. This sample screen contains the manufacturer's default values for the MPC-6800.

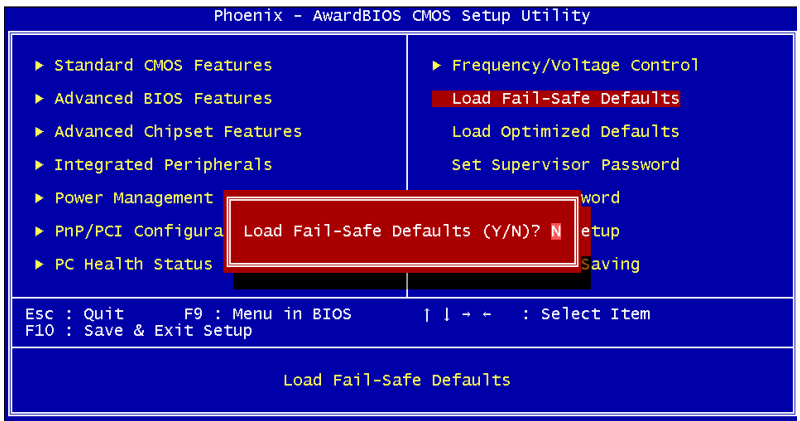


3.11 Load Fail-Safe Defaults

When you press <Enter> on this item you get a confirmation dialog box with a message similar to:

Load Fail-Safe Default (Y/N)?

Pressing "Y" loads the BIOS default values for the most stable, minimal performance system operations.

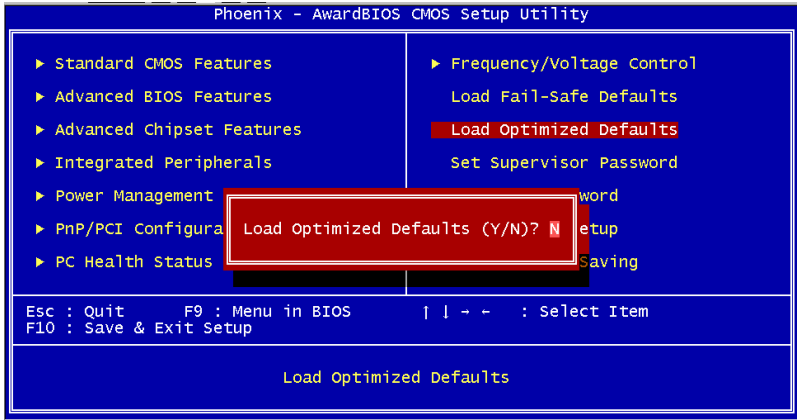


3.12 Load Optimized Defaults

When you press <Enter> on this item you get a confirmation dialog box with a message similar to:

Load Optimized Defaults (Y/N)?

Pressing "Y" loads the default values that are manufacturer's settings for optimal performance system operations.



3.13 Set Supervisor/User Password

You can set either SUPERVISOR or USER PASSWORD, or both of them. The difference between the two is that the supervisor password allows unrestricted access to enter and change the options of the setup menus, while the user password only allows entry to the program, but not modify options.

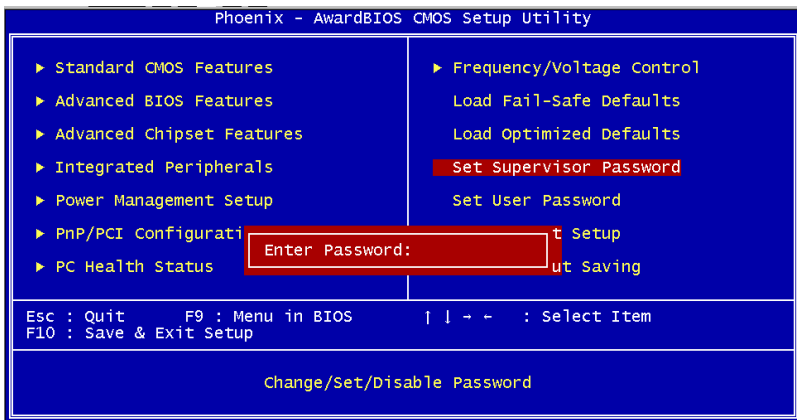
To abort the process at any time, press Esc.

In the Security Option item in the BIOS Features Setup screen, select System or Setup:

System Enter a password each time the system boots and whenever you enter Setup.

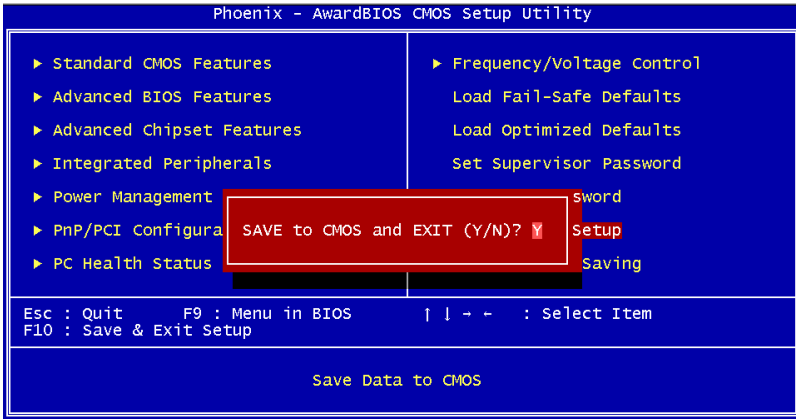
Setup Enter a password whenever you enter Setup.

NOTE: To clear the password, simply press Enter when asked to enter a password. Then the password function is disabled.



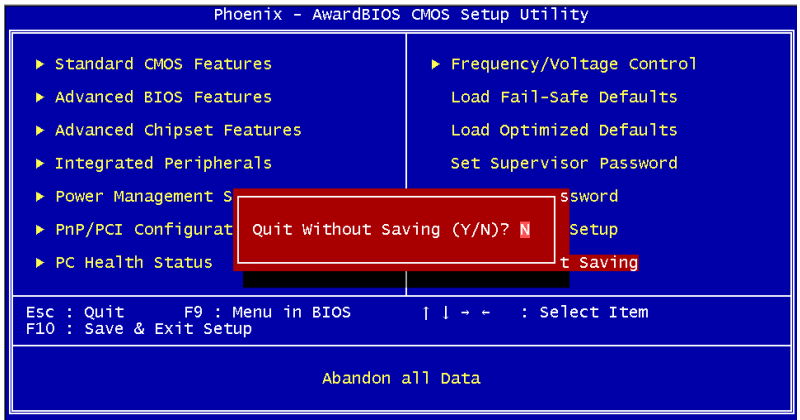
3.14 Save & Exit Setup

If you select this option and press <Enter>, the values entered in the setup utilities will be recorded in the chipset's CMOS memory. The microprocessor will check this every time you turn on your system and compare this to what it finds as it checks the system. This record is required for the system to operate.



3.15 Exit without saving

Selecting this option and pressing <Enter> allows you to exit the Setup program without recording any new value or changing old one.



Chapter

4

**Driver
Installation**

The MPC-6800 comes with a CD-ROM that contains all drivers and utilities that meet your needs.

Follow the sequence below to install the drivers:

Step 1 – Install VIA 4in1 Driver for Windows 9x-XP

Step 2 – Install VIA CLE266 Graphics Driver

Step 3 – Install Realtek 8100BL/8110S Ethernet Driver.

Step 4 – Install Realtek AC97 Audio Driver

USB 2.0 Drivers VIA are available for download using Windows Update for both Windows XP and Windows 2000. For additional information regarding USB 2.0 support in Windows XP and Windows 2000, please visit www.microsoft.com/hwdev/usb/.

The last step is to install VIA USB 2.0 driver after you complete Windows Service Pack Installation. You have to install VIA USB 2.0 driver due to the compatibility issue.

Please read instructions below for further detailed installations.

4.1 Installation:

Insert the MPC-6800 CD-ROM into the CD-ROM Drive. And install the drivers from Step 1 to Step 4 in order.

Step 1 – Install VIA 4in1 for Windows 9x-XP

1. Click on the folder and then double click on the **Setup.exe**.
2. Follow the instructions that the window will show you.
3. The system will help you install the driver automatically.

Step 2 – Install VIA CLE266 Graphics Driver

1. Click on the folder and select the operation system ,VGA Functions (Rotation/Simult/Wishld) then double click **Setup.exe**.
2. Follow the instructions that the window will show you.
3. The system will help you install the driver automatically.

Note:

After VGA driver has installed, the large font size will appear on the monitor when you turn on the TV-Out function. It's convenience for reading on the television screen.

Step 3 – Install Realtek 8100BL/8110S LAN Driver.

1. Click on the folder and select the speed , system then double click on the **Setup.exe**.
2. Follow the instructions that the window will show you.
3. The system will help you install the driver automatically.

Step 4 – Install Realtek AC97 Audio Driver

1. Click on the folder and then double click on the **Setup.exe**.
2. Follow the instructions that the window will show you.
3. The system will help you install the driver automatically.

Note:

Only under Windows XP environment, you can enable the dual display function. If you want to equip extra graphic card to support dual view function, the local distributor will give you the technical and exact suggestion and solution. Most graphic cards are not compatible with MPC-6800.

Appendix

A

I/O Information

A.1 IO Address Map

Address	Description	User Address
000-01F	DMA Controller #1	000-000F
020-03F	Interrupt Controller #1, Master	020-021
040-05F	System Time	040-043
060-06F	8042 (Keyboard Controller)	060-064
070-07F	Real time Clock, NMI (non-maskable Interrupt) Mask	070-073
080-09F	DMA Page Register	080-08F
0A0-0BF	Interrupt Controller #2	0A0-0A1
0C0-0DF	DMA Controller #2	0C0-0DF
0F0-0FF	Math Coprocessor	0F0-0FF
170-177	Secondary IDE Channel	170-177
1F0-1F7	Primary IDE Channel	1F0-1F7
278-27F	Parallel Printer Port 2 (LPT3)	278-27F
2E0-2E7	Serial Port 6	2E8-2EF
2E8-2EF	Serial Port 4	2F8-2FF
2F8-2FF	Serial Port 2	378-37F
378-37F	Parallel Printer Port 1 (LPT2)	3B0-3BF
3B0-3BF	Monochrome Display and Printer Adapter (LPT1)	3D0-3DF
3D0-3DF	EGA / VGA card	3E8-3EF
3E0-3E7	Serial Port 5	3F2-3F7
3E8-3EF	Serial Port 3	3F8-3FF
3F0-3F7	Diskette Controller	3F8-3FF
3F8-3FF	Serial Port 1	3F8-3FF
803	GPIO	803

A.2 1st MB Memory Address Map

Memory Address	Description
00000-9FFFF	System memory
A0000-BFFFF	VGA buffer

C0000-CFFFF	VGA BIOS
E0000-FFFFFF	System BIOS

A.3 IRQ Mapping Chart

IRQ0	System Timer	IRQ8	System CMOS / Real time clock
IRQ1	Keyboard	IRQ9	Microsoft ACPI – Compliant system
IRQ2	Cascade to IRQ Controller	IRQ10	COM5
IRQ3	COM2	IRQ11	COM6
IRQ4	COM1	IRQ12	PS/2 mouse
IRQ5	COM3	IRQ13	FPU
IRQ6	Floppy Disk Controller	IRQ14	Primary IDE
IRQ7	Printer/COM4	IRQ15	Secondary IDE

A.4 DMA Channel Assignments

DMA Channel	Function
0	Available
1	Available
2	Standard Floppy Disk Controller
3	Available
4	Direct Memory Access Controller
5	Available
6	Available
7	Available

Appendix

B

**Programming the
Watchdog Timer**

B.1 Fintek F81216D Watchdog Timer Initial Program

```
.model small
.stack
.data
.code
mov  dx,400h ;400h set watchdog status
mov  al,03h  ;Bit[0-2]
                ;Bit 2 : minute
                ;Bit 1 : second
                ;Bit 0 : clear timeout flag
out  dx,al
mov  dx,401h ;401h set watchdog timer unit
mov  al,03h
out  dx,al   ;Need to write 401h twice to set timer unit
out  dx,al   ;set 00h to 401h to disable watchdog function

mov  ah,4ch
int  21h
end
```

PS : Any access (Read and Write) on 401h will cause watchdog timer reset .

Appendix

C

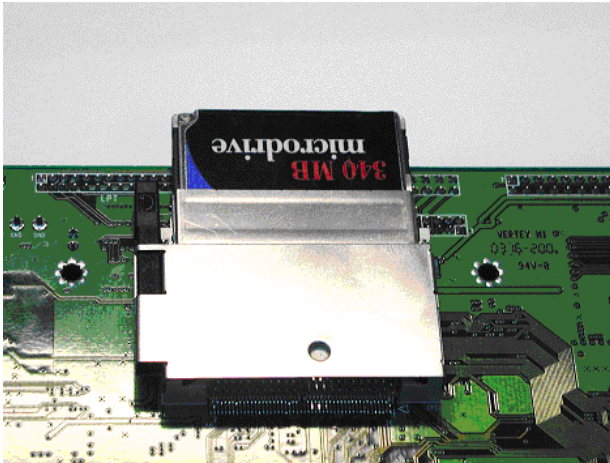
**CompactFlash® Cover
Installation Guide**

C.1 How to install the CompactFlash cover

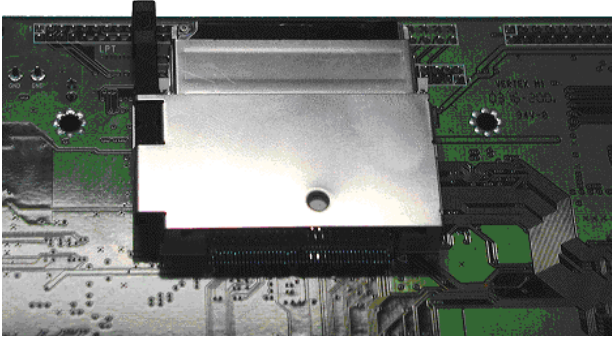
MPC-6800 is given a CompactFlash Card cover with the product. The purpose for the CompactFlash Card cover is to prevent users from dropping the CompactFlash Card under the condition of the delivery and system operation.

Please follow the steps below to install the CompactFlash Card cover. The instructions are simply for your reference which mean you may install the CompactFlash Card cover in the way you prefer.

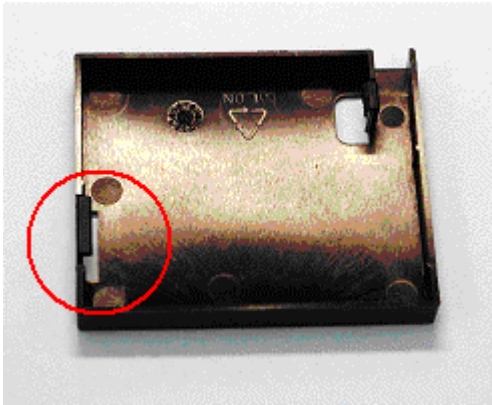
Step 1: Plug in CompactFlash Card

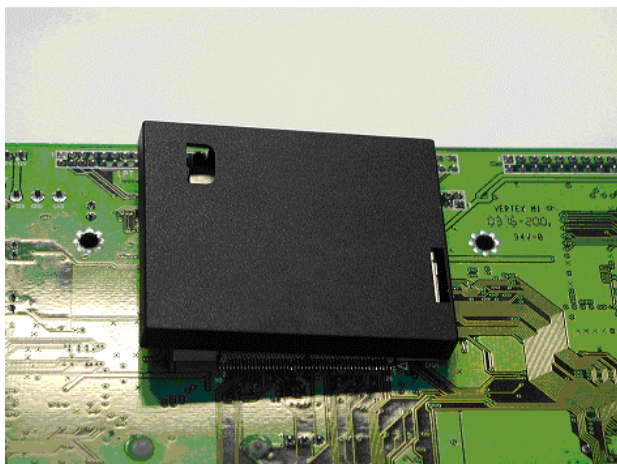


Step 2: Push the CompactFlash Card forward until the end.

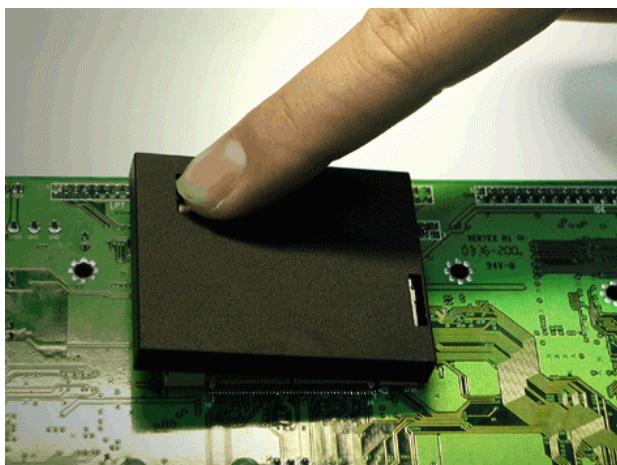


Step 3: Put the cover on from the right to left and hook up the CompactFlash Card white base with the crook on the cover.

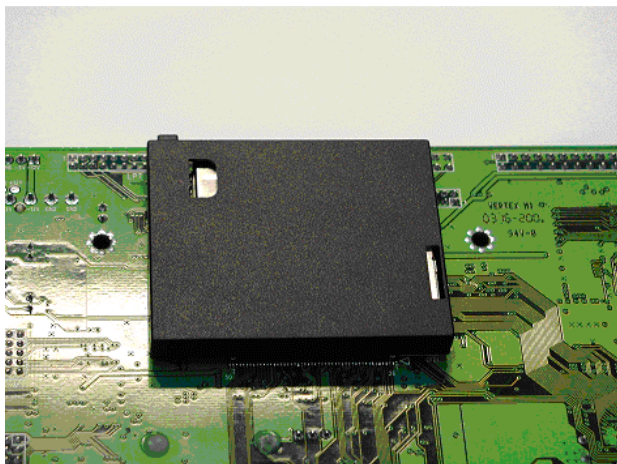




Step 4: Press a little bit with the finger on the hole of the cover.



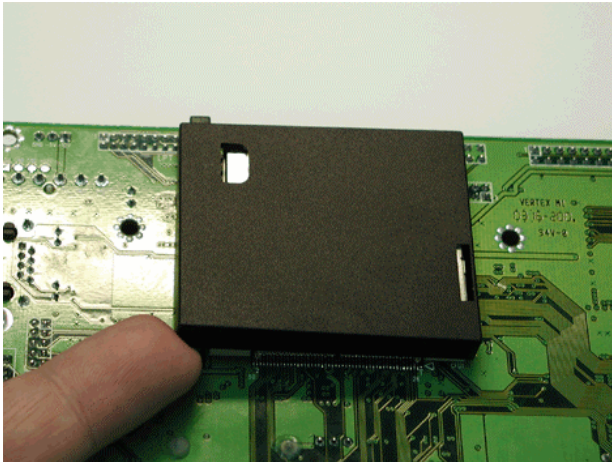
Step 5: Done



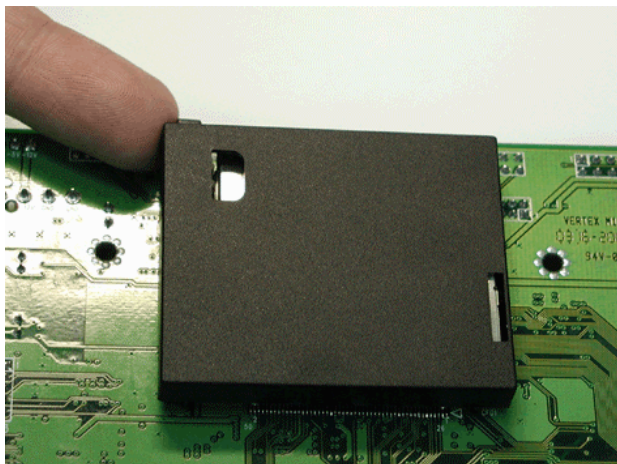
C.2 How to disassemble the CompactFlash cover

If you would like disassemble the CompactFlash Card, please follow the steps below. If you don't follow the regular steps to disassemble, the cover may suffer the permanent damage.

Step 1: Pull the cover a little bit upwards from the corner indicated.



Step 2: Pull the cover hard from the reverse corner indicated.



In this way, the cover can be disassembled as easy as possible.