

Tks!EX-93211/93511/93711/93911

Panel PC User Manual

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Warning!

This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, it may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

Electric Shock Hazard – Do not operate the machine with its back cover removed. There are dangerous high voltages inside.

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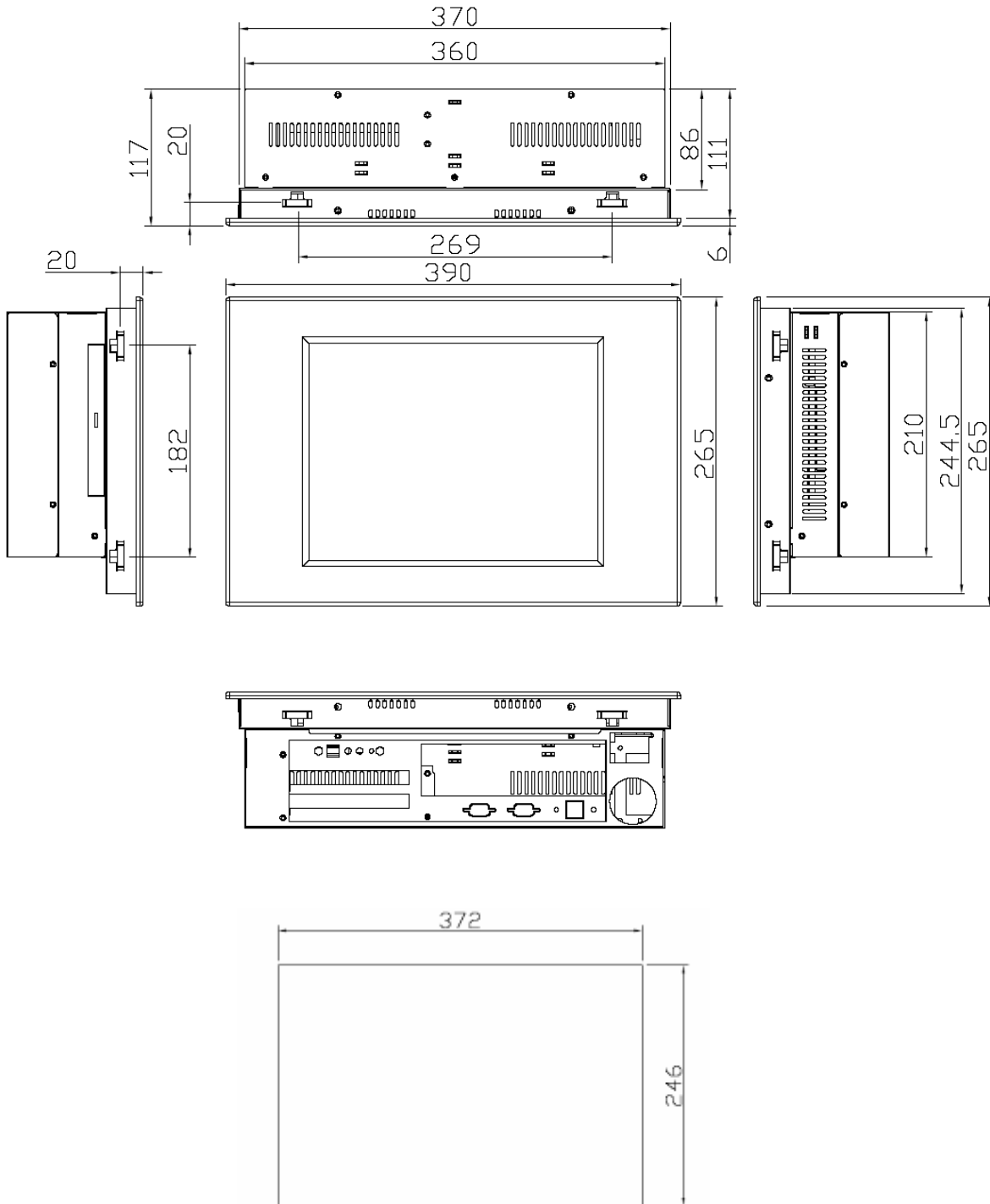
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1.1 Specifications

Specs \ Model	EX-93211	EX-93511	EX-93711	EX-93911
CPU	Intel Celeron 2.4GHz Processor/Intel Pentium 4 2.0 ~ 2.4GHz CPU			
Chipset	Intel 845GV			
Processor Side Bus Freq.	533MHz/400MHz			
System Memory	1 x DDR Slot supporting up to 1GB 200/266/333 SDRAM			
L2 Cache	128K/256K/512K, CPU integrated			
Display Size	12.1" 800x600 TFT LCD	15" 1024x768 TFT LCD	17" 1280x1024 TFT LCD	17" 1280x1024 TFT LCD
Maximum Colors	262K	16.2M	16.2M	16.2M
Viewing Angle (H/V)	120°/95°	140°/125°	140°/130°	140°/140°
Luminance (cd/m ²)	300	400	300	250
Backlight Lifetime	50,000 Hours			
Rating	NEMA 4/IP65 certified Front Bezel			
Touch Screen Type	8-wire Analog Resistive (optional)			
Serial Port	4 x COM Port, COM4 reserved for Touch Screen			
USB Port	4 x USB2.0 Port			
Parallel Port	1 x Parallel Port supporting SPP/EPP/ECP			
Drive Bays	1 x 40GB HDD and 1 x Slim CD-ROM			
Keyboard & Mouse	PS/2 Keyboard and Mouse Connectors			
Digital I/O	4 in/4 out (optional)			
BIOS	Award BIOS, ACPI Supported			
Watchdog Timer	Generates system reset, 256 levels			
LAN	Realtek 8100BL LAN Controller (10/100Mb)			
VGA	Intel 845GV chipset integrated, AGP 4X			
Expansion Slot	2 x PCI Expansion Slot			
IDE Interface	Ultra DMA 33/66/100 + Built-in ICH4			
Audio	ICH4 Integrated Audio with AC97 Codec			
Power Supply	220W AC Universal 190~240V AC			
Construction and Color	Steel Chassis and Beige			
Dimensions (WxHxD)	390 x 265 x 111	410 x 310 x 117	457 x 355 x 123	484x400x123
Operating Temperature	0~50 (32 ~122)			
Storage Temperature	-10 ~ 75 (14 ~167)			

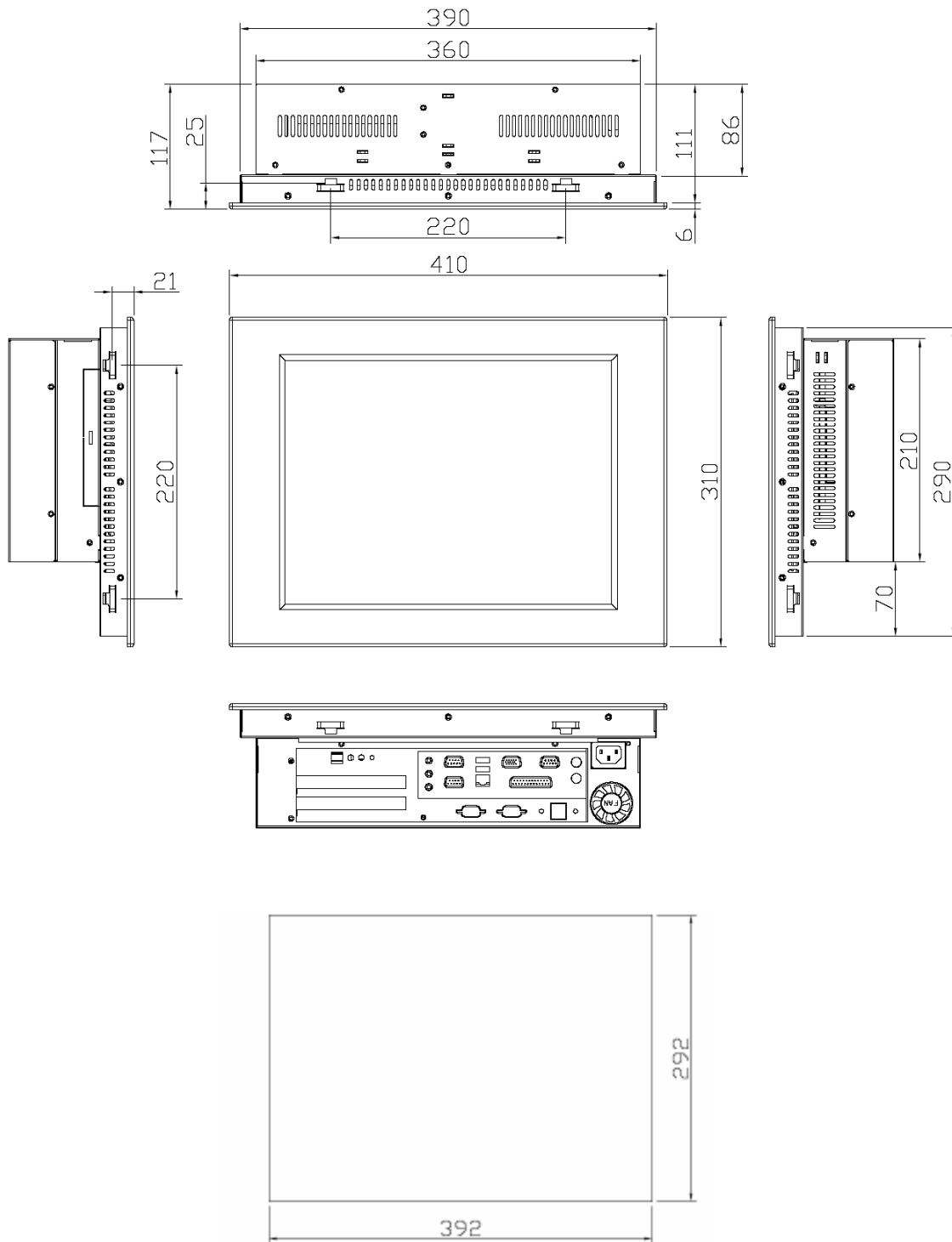
Relative Humidity	10~90% (non-condensing)
Vibration	5~17Hz, 0.1" double amplitude displacement 17~640Hz, 1.5G acceleration peak to peak
Shock	10G acceleration peak to peak (11 millimeters)

1.2 Dimensions



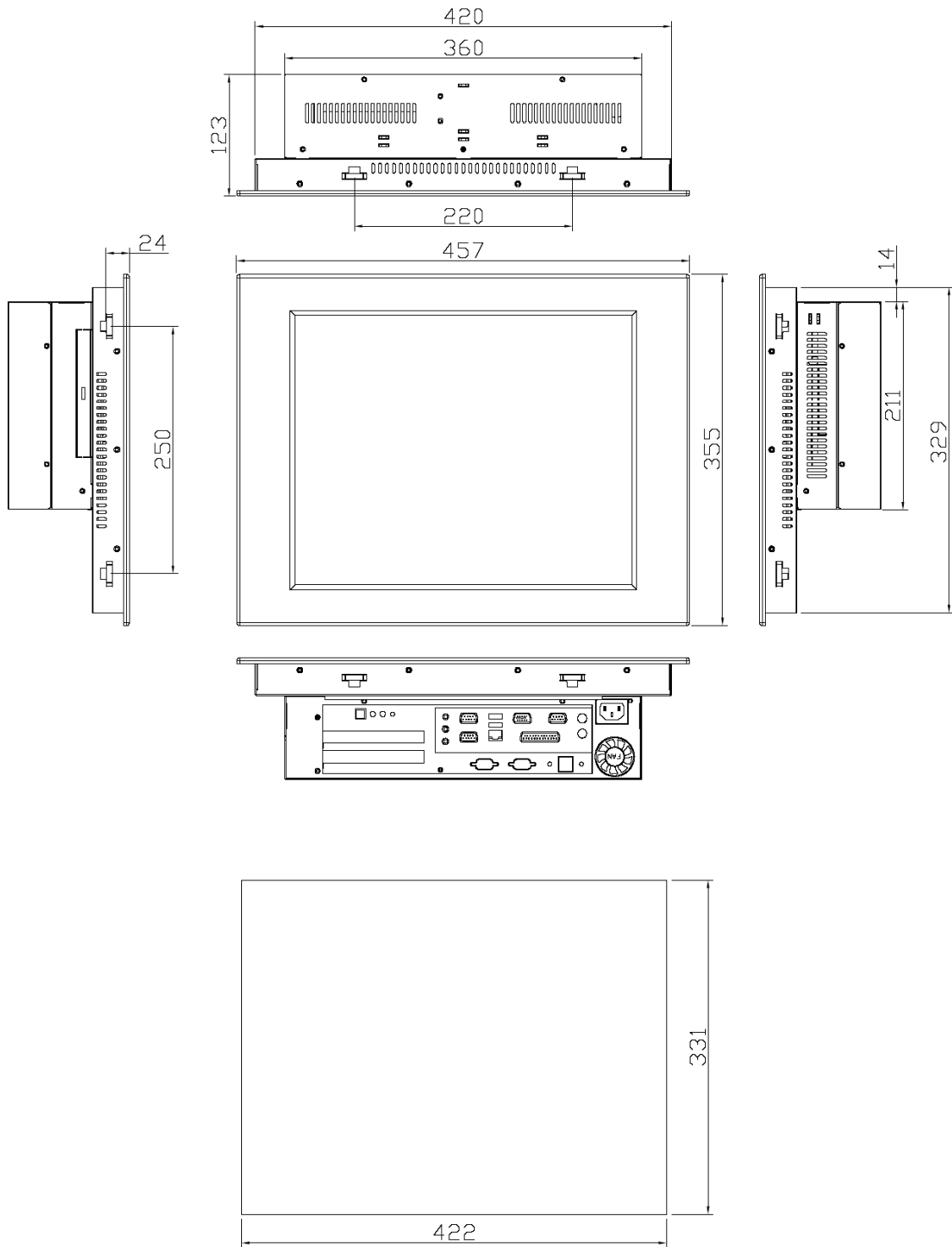
Mounting Hole Size

Figure 1.1: Dimensions of the EX-93211



Mounting Hole Size

Figure 1.2: Dimensions of the EX-93511



Mounting Hole Size

Figure 1.3: Dimensions of the EX-93711

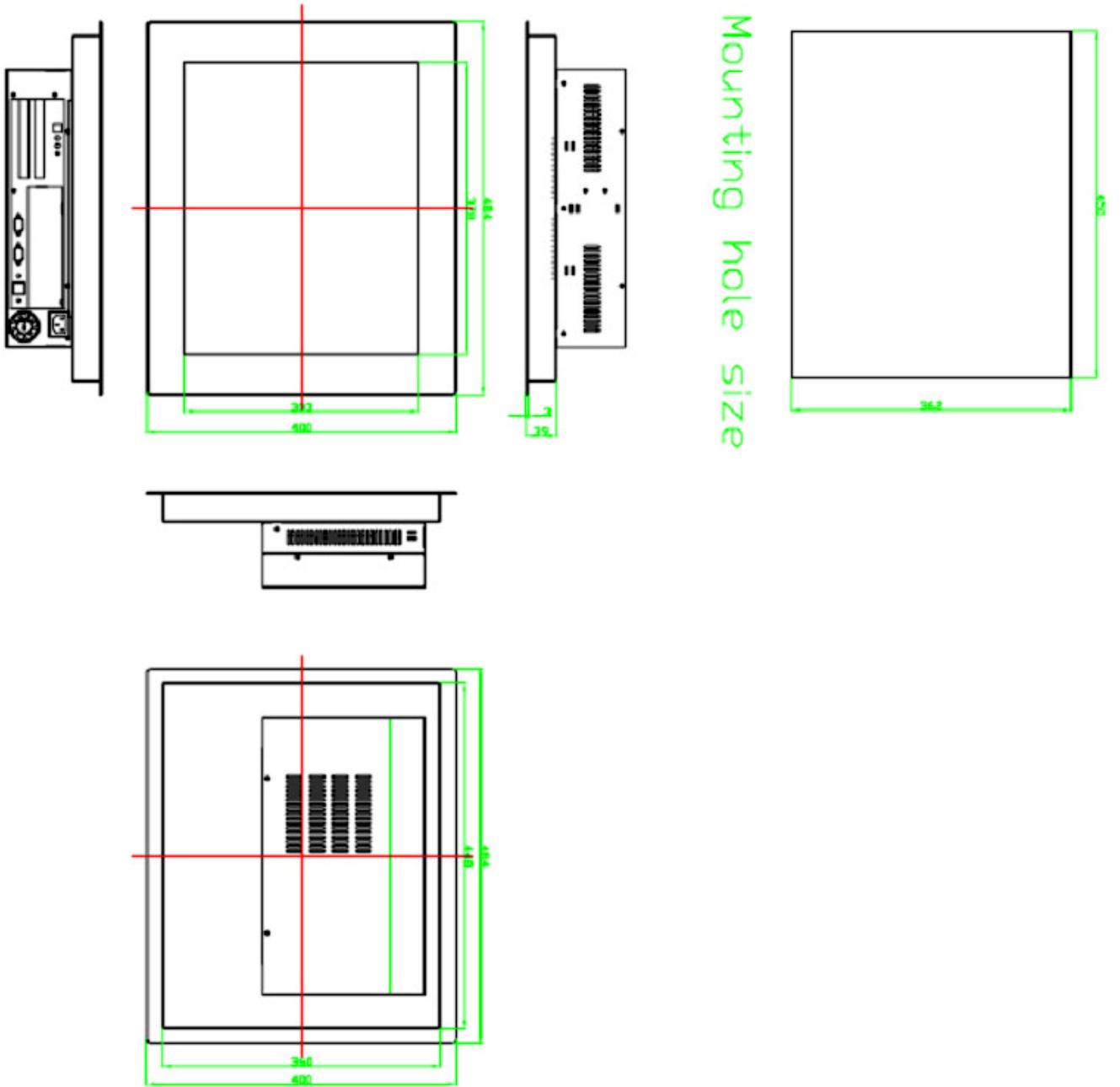


Figure 1.3: Dimensions of the EX-93911

1.3 System Configuration

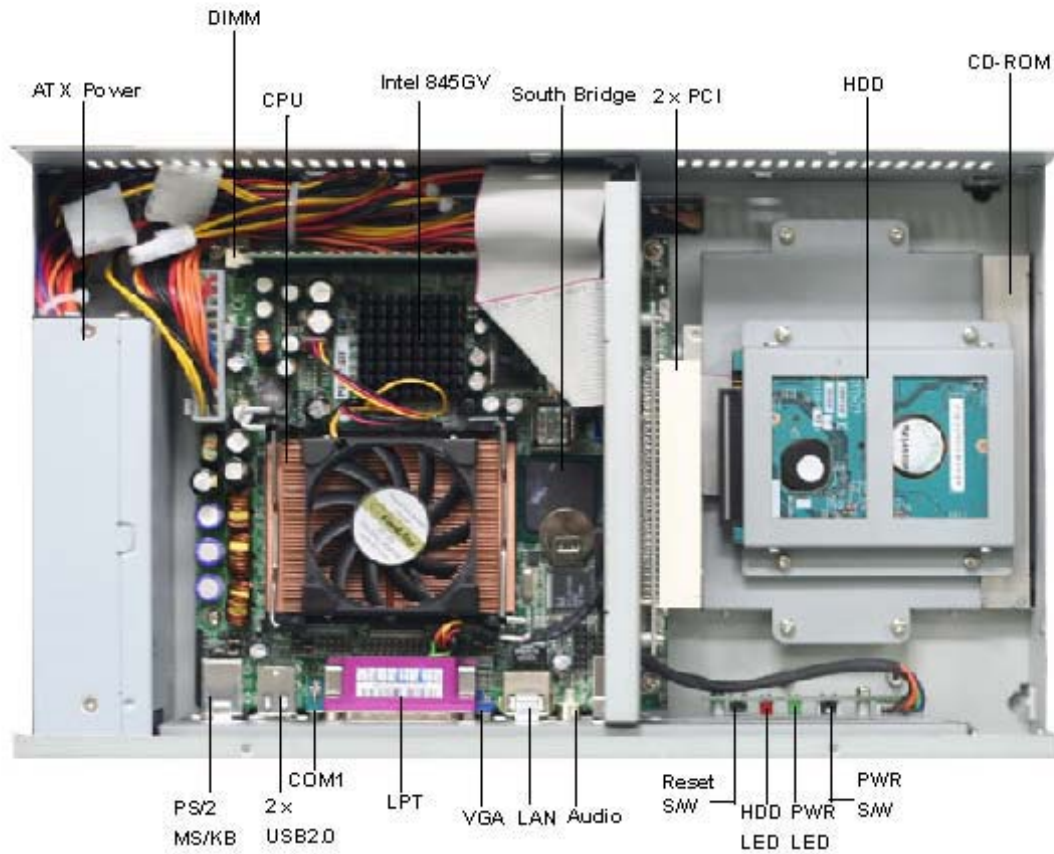
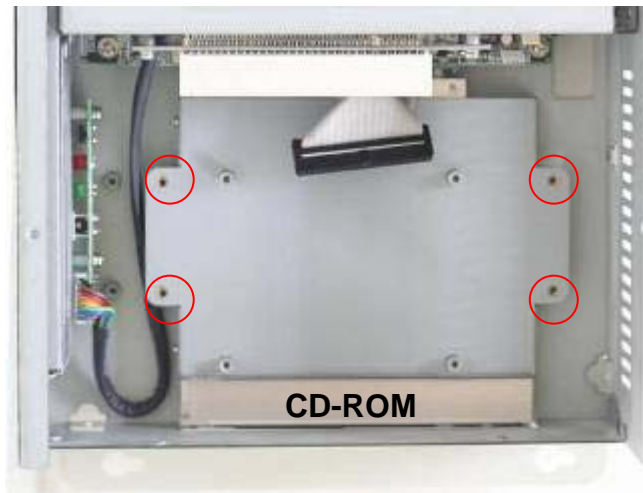


Figure 1.4: System Configuration of the EX-93211/93511/93711/93911

1.4 Installation of CD-ROM & HDD

Shown in the picture are the four screws (as circled in red) that tighten or loosen the bracket where the CD-ROM is placed underneath. On top of the bracket is where the HDD is placed. To remove the CD-ROM, the HDD has to be removed first.



Now slide the HDD into the bracket as shown in the picture. After that, connect the HDD to the 44-pin black IDE by means of the cable, making sure the red stripe of the cable is connected to the pin 1 of the connector of the HDD



The red circles shown in the picture are the screws that put the CD-ROM in place. The arrows shown are where the HDD, which is just placed on top of the CD-ROM, is tightened.

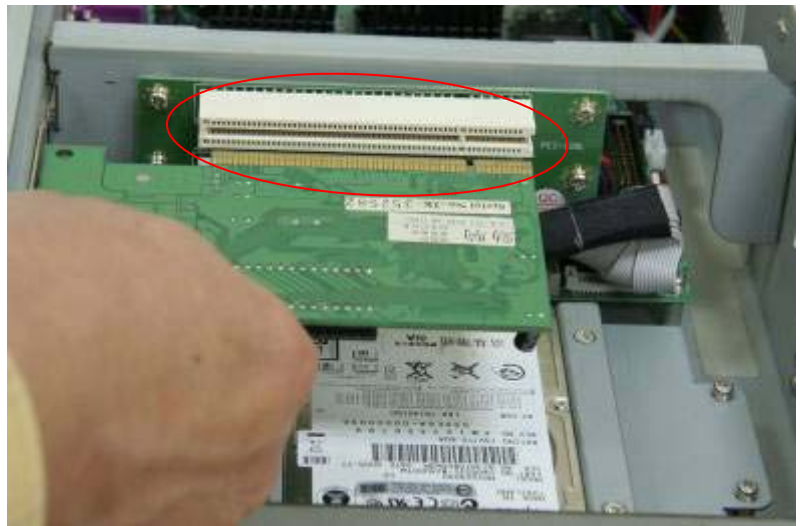


1.5 Installation of PCI Addon

Shown in the picture are the two PCI expansion slots as circled. They can be inserted with any addon for expanded functions.



Now slide the addon into the PCI slot, making sure the golden part faces the slot. When both parts that are interfaced together come into the right contact, slightly push the addon into the rail of the slot. This shows the addon is already completely connected.



After sliding the addon into the PCI expansion slot, get the two screws as circled tightened to finish the connection.



1.6 Safety Precautions

Follow the messages below to avoid your systems from damage:

- * Avoid your system from static electricity on all occasions.
- * Prevent electric shock. Don't touch any components of this card when the card is power-on. Always disconnect power when the system is not in use.
- * Disconnect power when you change any hardware devices. For instance, when you connect a jumper or install any cards, a surge of power may damage the electronic components or the whole system.

1.7 Brief Description of the EX-93211/93511/93711/93911

The EX-93211/93511/93711/93911 is a rugged and compact panel-mount industrial PC, which comes with a 12-inch (luminance of 300 cd/m²)/15-inch (luminance of 400 cd/m²)/17-inch (luminance of 300 cd/m²)/19-inch (luminance of 250 cd/m²) TFT LCD. It is powered by an Intel Celeron 2.4GHz processor/Intel Pentium 4 processor. The industrial panel PC also features one PCI expansion slot, four COM ports, four USB 2.0 ports, one 40GB HDD, one CD-ROM, an ATX 12V power input. It is ideal for use as a PC-based controller for Automotive, Logistic Process, Materials Handling, and Kiosk applications.



Figure 1.5: Front View of EX-93211/93511/93711/93911

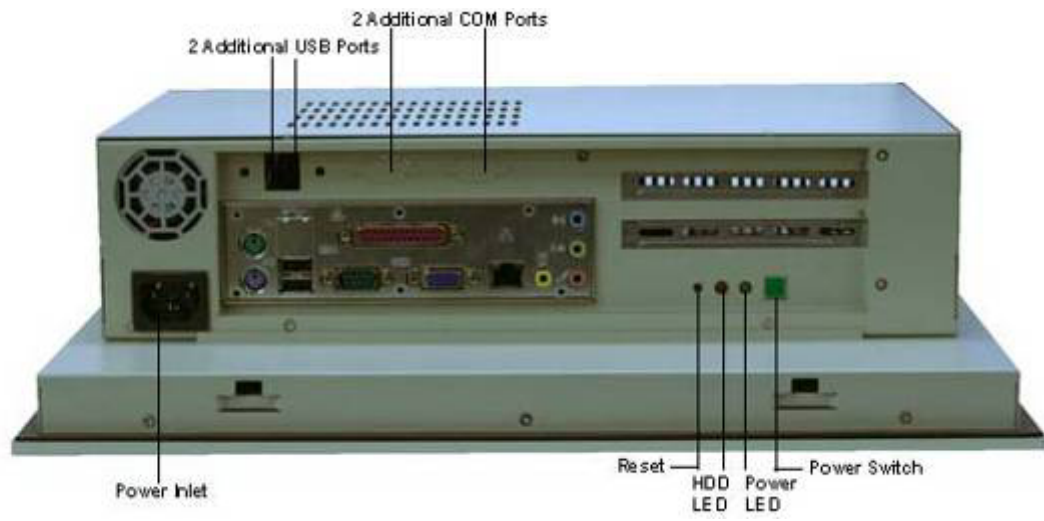


Figure 1.6: Rear View of EX-93211/93511/93711/93911

2.1 Mainboard

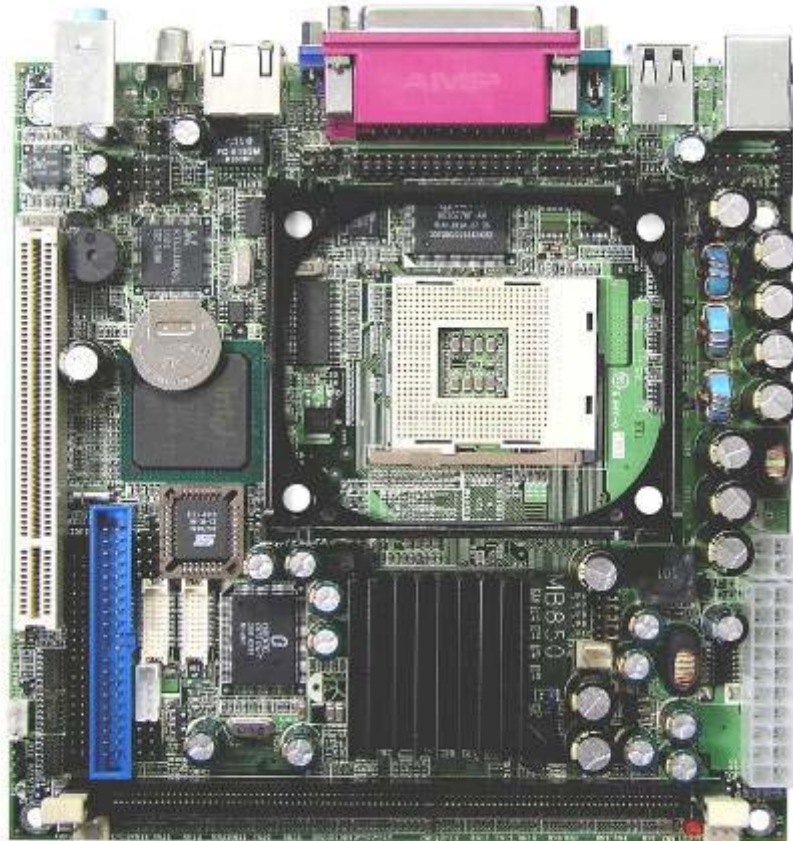


Figure 2.1: Mainboard Overview

2.2 Installations

This section provides information on how to use the jumpers and connectors on the mainboard in order to set up a workable system.

2.2.1 Installing the CPU

The mainboard supports a Socket 478 processor socket for Intel Pentium 4 processors or Pentium 4 Mobile processors. The Socket 478 processor socket comes with a lever to secure the processor. Place the processor into the socket by making sure the notch on the corner of the CPU corresponds with the notch on the inside of the socket. Once the processor slides into the socket, return the lever to the lock position as shown in Figure 2.2. After you have installed the processor into the socket, check if the jumpers for the CPU type and speed are correct.

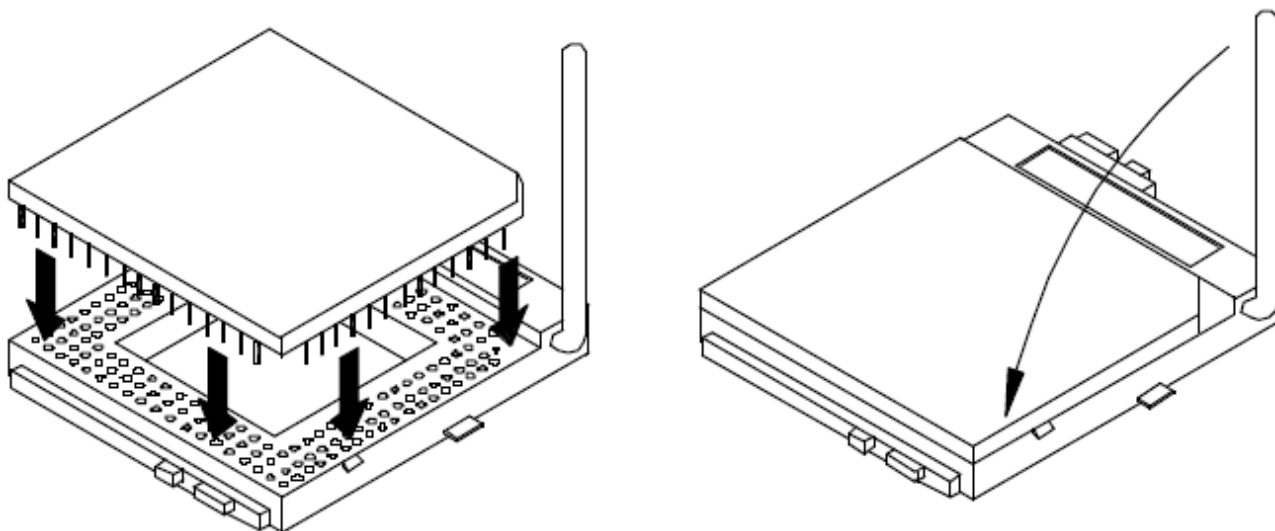


Figure 2.2: Installation of CPU

Note:

Make sure the heat sink and the top surface of the CPU are in total contact to avoid the overheating problem that would cause your system to hang or be unstable.

2.2.2 Installing the Memory

The mainboard supports one DDR memory socket for a maximum total memory of 1GB. The memory module capacities supported are 128MB, 256MB, 512MB and 1GB. The following figure shows the supported DDR DIMM configurations. The Intel 845GV supports configurations defined in the JEDEC DDR DIMM specifications only. Non-JEDEC standard DIMMs such as double-sided x16 DDR SDRAM DIMMs are not supported.

To install the DDR module, locate the DIMM slot on the embedded board and perform the following steps:

1. Hold the DDR module so that the key of the DDR module is aligned with those on the memory slot.
2. In an upright position, gently insert the DDR module into the DIMM slot until it is deeply sunk.
3. Lock the DDR module in place by pushing the levers on both sides of the module inward.

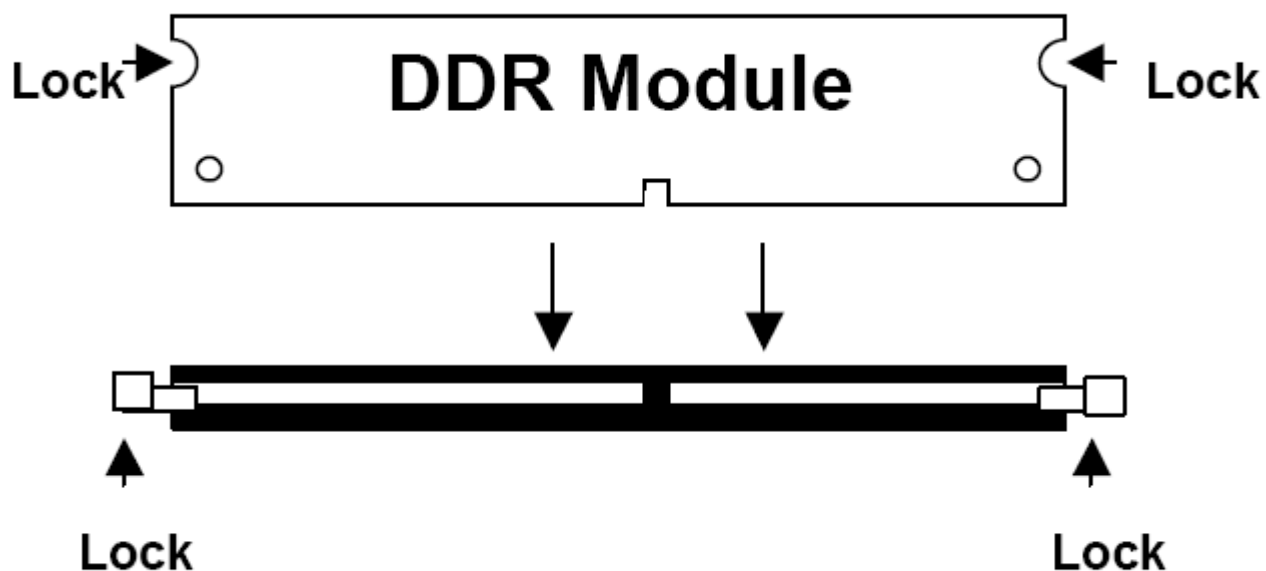


Figure 2.3: Installation of Memory Module

2.2.3 Installing the Jumpers

Jumpers are used on the mainboards to select various settings and features according to your needs and applications. The following lists the connectors on the mainboard and their respective function.

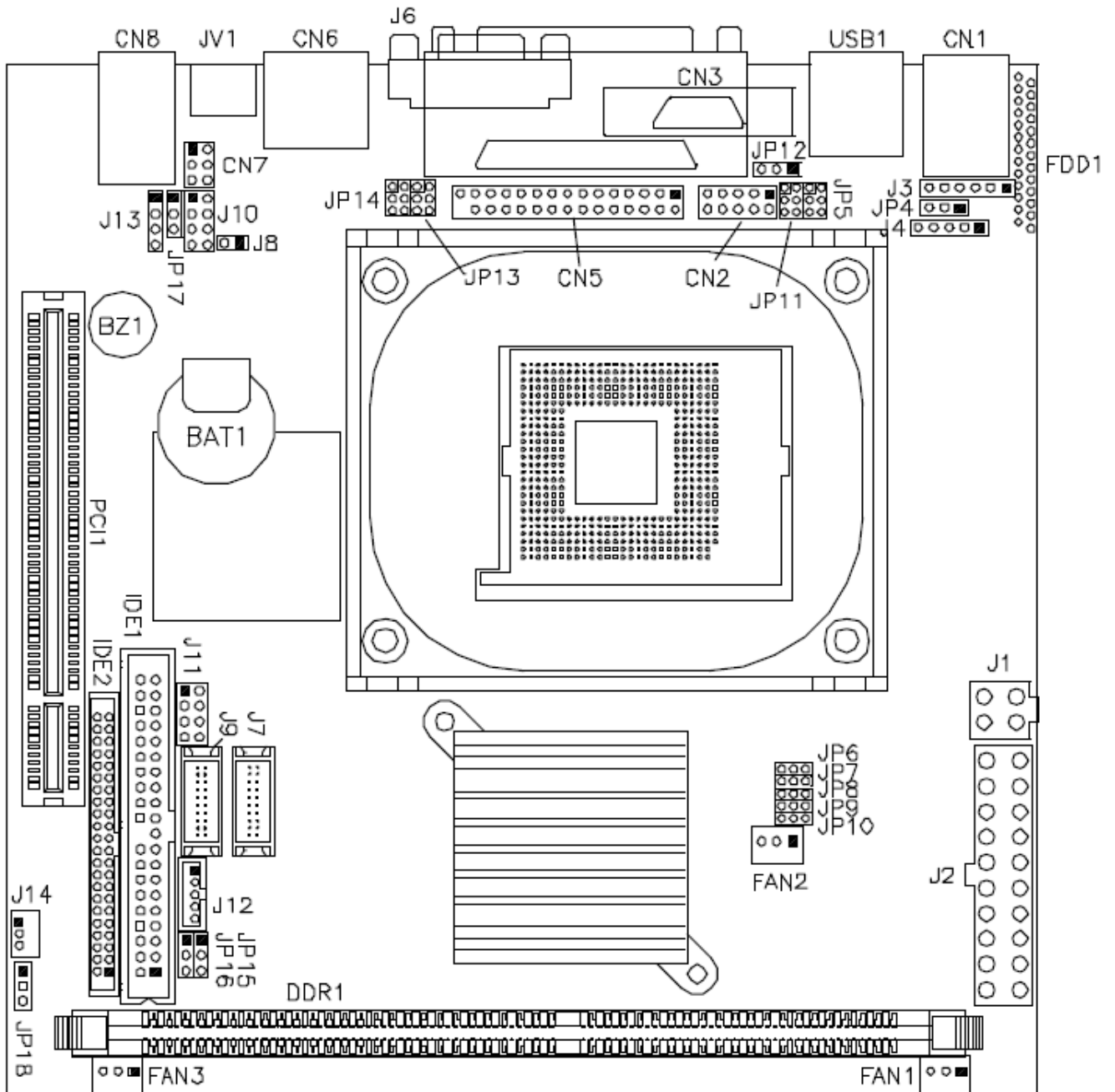
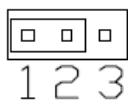


Figure 2.4: Location of Jumpers

JP4: Keyboard/Mouse Power Setting



Pin #	Signal Name
1	Vcc
2	KB/MS power
3	+5VSB

Default: 1-2 short

J8: RTL8100BL LAN Enable/Disable

J8	10/100Mb LAN
<p>Open</p>	Enable
<p>Short</p>	Disable

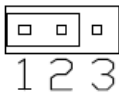
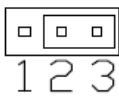
JP16: LVDS Panel Power Select

JP16	LVDS Panel Power
<p>1 2 3</p>	3.3V (default)
<p>1 2 3</p>	5V

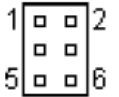
Note: The LVDS panel resolution can be configured in the BIOS Setup.

JP17: Clear CMOS Contents

Use JP4 to clear the CMOS contents. *Note that the ATX-power connector should be disconnected from the board before clearing CMOS.*

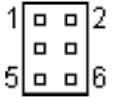
JP17	Setting	Function
	Pin 1-2 Short/Closed	Normal
	Pin 2-3 Short/Closed	Clear CMOS

JP11: COM1 RS232 +5V / +12V Power Setting

Pin #	Signal Name	JP11	Signal Name	Pin #
1	RI		+12V	2
3	RI (Default)		RI (Default)	4
5	RI		+5V	6

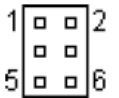
COM1 Settings: Pin 1-2 short = +12V, Pin 5-6 short = +5V, Pin 3-4 Standard COM Port

JP5: COM2 RS232 +5V / +12V Power Setting

Pin #	Signal Name	JP2	Signal Name	Pin #
1	RI		+12V	2
3	RI (Default)		RI (Default)	4
5	RI		+5V	6

COM2 Settings: Pin 1-2 short = +12V, Pin 5-6 short = +5V, Pin 3-4 Standard COM Port

JP14: COM3 RS232 +5V / +12V Power Setting

Pin #	Signal Name	JP14	Signal Name	Pin #
1	RI		+12V	2
3	RI (Default)		RI (Default)	4
5	RI		+5V	6

COM3 Settings: Pin 1-2 short = +12V, Pin 5-6 short = +5V, Pin 3-4 Standard COM Port

JP13: COM4 RS232 +5V / +12V Power Setting

Pin #	Signal Name	JP13	Signal Name	Pin #
1	RI		+12V	2
3	RI (Default)		RI (Default)	4
5	RI		+5V	6

COM4 Settings: Pin 1-2 short = +12V, Pin 6-5 short = +5V, Pin 3-4 Standard COM Port

JP18: AT or ATX Power Setting

JP18	Setting	Function
	Pin 1-2 Short/Closed	ATX Power (Default)
	Pin 2-3 Short/Closed	AT Power

2.2.4 Connectors on the Mainboard

The connectors on the mainboard allows you to connect external devices, such as keyboard, floppy disk drives, hard disk drives, printers, etc. the following table lists the connectors on the mainboard and their respective functions

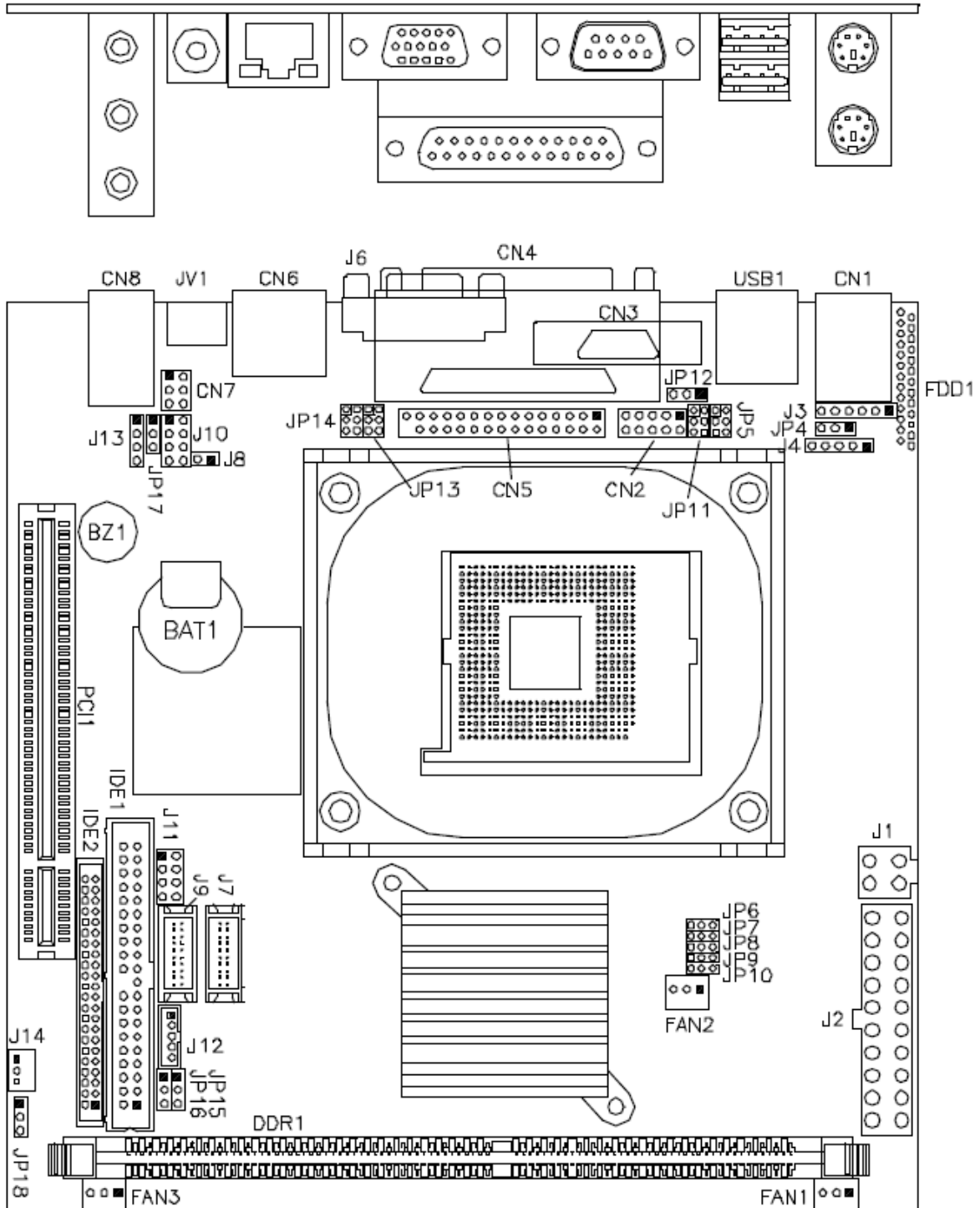
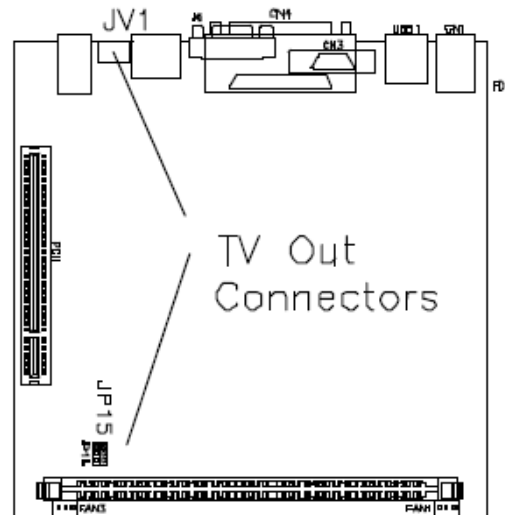


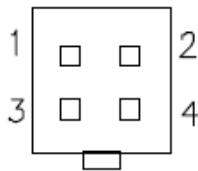
Figure 2.5: Location of Connectors

JV1, JP15: TV out Connector (RCA Jack and 3-pin Header)

The locations of the TV out connector are as below:

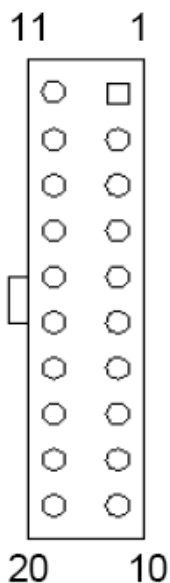


J1: ATX 12V/+12V Power Connector



Pin #	Signal Name
1	Ground
2	Ground
3	+12V
4	+12V

J2: ATX Power Supply Connector



Signal Name	Pin #	Pin #	Signal Name
3.3V	11	1	3.3V
-12V	12	2	3.3V
Ground	13	3	Ground
PS-ON	14	4	+5V
Ground	15	5	Ground
Ground	16	6	+5V
Ground	17	7	Ground
-5V	18	8	Power good
+5V	19	9	5VSB
+5V	20	10	+12V

J3: External PS/2 Keyboard Connector

J3, a 6-pin header connector, has functions for external keyboard.

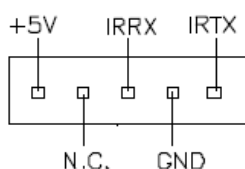
■	Signal Name	Pin #
○	Vcc	1
○	Internal KB CLK	2
○	External KB CLK	3
○	Internal KB data	4
○	External KB data	5
○	Ground	6

Default: 2-3 short, 4-5 short for internal CN1 keyboard

For external keyboard, use 1, 3, 5, 6 pin

J4: IrDA Connector

J4 is used for an optional IrDA connector for wireless communication.



Pin #	Signal Name
1	+5V
2	No connect
3	Ir RX
4	Ground
5	Ir TX

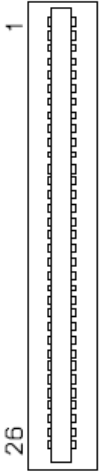
CN5: Serial Ports



Pin #	Signal Name (RS-232)
1	DCD, Data carrier detect
2	RXD, Receive data
3	TXD, Transmit data
4	DTR, Data terminal ready
5	Ground
6	DSR, Data set ready
7	RTS, Request to send
8	CTS, Clear to send
9	RI, Ring indicator
10	No Connect.

FDD1: Floppy Drive Connector

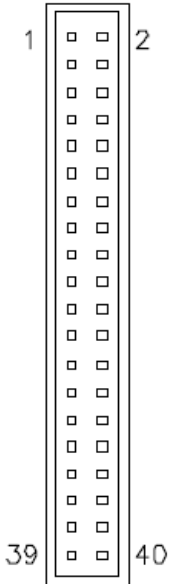
FDD1 is a slim 26-pin connector and will support up to 2.88MB FDD.



Signal Name	Pin #	Pin #	Signal Name
VCC	1	2	INDEX
VCC	3	4	DRV_SEL
VCC	5	6	DSK_CH
NC	7	8	NC
NC	9	10	MOTOR
DINST	11	12	DIR
NC	13	14	STEP
GND	15	16	WDATA
GND	17	18	WGATE
GND	19	20	TRACK
NC	21	22	WPROT
GND	23	24	RDATA
GND	25	26	SIDE

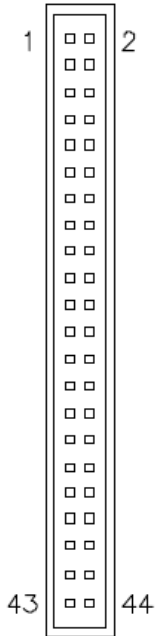
IDE1, IDE2: EIDE Connectors

IDE1: Primary IDE Connector



Signal Name	Pin #	Pin #	Signal Name
Reset IDE	1	2	Ground
Host data 7	3	4	Host data 8
Host data 6	5	6	Host data 9
Host data 5	7	8	Host data 10
Host data 4	9	10	Host data 11
Host data 3	11	12	Host data 12
Host data 2	13	14	Host data 13
Host data 1	15	16	Host data 14
Host data 0	17	18	Host data 15
Ground	19	20	Protect pin
DRQ0	21	22	Ground
Host IOW	23	24	Ground
Host IOR	25	26	Ground
IOCHRDY	27	28	Host ALE
DACK0	29	30	Ground
IRQ14	31	32	No connect
Address 1	33	34	No connect
Address 0	35	36	Address 2
Chip select 0	37	38	Chip select 1
Activity	39	40	Ground

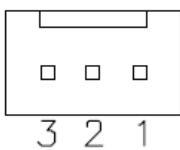
IDE2: Secondary IDE Connector



Signal Name	Pin #	Pin #	Signal Name
Reset IDE	1	2	Ground
Host data 7	3	4	Host data 8
Host data 6	5	6	Host data 9
Host data 5	7	8	Host data 10
Host data 4	9	10	Host data 11
Host data 3	11	12	Host data 12
Host data 2	13	14	Host data 13
Host data 1	15	16	Host data 14
Host data 0	17	18	Host data 15
Ground	19	20	Key
DRQ0	21	22	Ground
Host IOW	23	24	Ground
Host IOR	25	26	Ground
IOCHRDY	27	28	Host ALE
DACK0	29	30	Ground
IRQ14	31	32	No connect
Address 1	33	34	No connect
Address 0	35	36	Address 2
Chip select 0	37	38	Chip select 1
Activity	39	40	Ground
Vcc	41	42	Vcc
Ground	43	44	N.C.

FAN1, FAN3: System Fan Power Connector

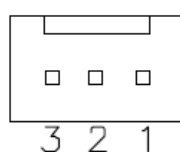
FAN1, FAN2 is a 3-pin header for system fans. The fan must be a 12V (500mA) fan.



Pin #	Signal Name
1	Ground
2	+12V
3	Rotation detection

FAN2: CPU Fan Power Connector

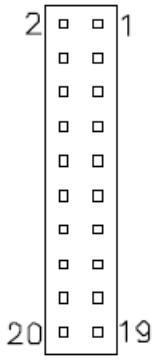
FAN3 is a 3-pin header for the CPU fan. The fan must be a 12V fan.



Pin #	Signal Name
1	Ground
2	+12V
3	Rotation detection

J9, J7: LVDS Connectors (1st channel, 2nd channel)

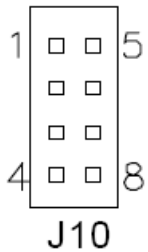
The LVDS connectors, available on MB850F only, are composed of the first channel (J9) and second channel (J7) to support 24-bit or 48-bit.



Signal Name	Pin #	Pin #	Signal Name
TX0-	2	1	TX0+
Ground	4	3	Ground
TX1-	6	5	TX1+
5V/3.3V	8	7	Ground
TX3-	10	9	TX3+
TX2-	12	11	TX2+
Ground	14	13	Ground
TXC-	16	15	TXC+
5V/3.3V	18	17	ENABKL
+12V	20	19	+12V

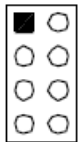
J10: USB Connectors

The following table shows the pin outs of the USB pin headers connectors. Overall, the one pin header support four USB ports (USB 2.0 compliant).



Signal Name	Pin	Pin	Signal Name
Vcc	1	5	Ground
USB0-	2	6	USB1+
USB0+	3	7	USB1-
Ground	4	8	Vcc

J11: System Function Connector



Signal Name	Pin	Pin	Signal Name
Ground	1	2	PS_ON
Power LED	3	4	Ground
5V	5	6	HDD Active
Ground	7	8	Reset

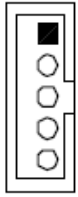
ATX power on switch: Pins 1-2

Power LED: Pins 3-4

HDD LED: Pins 5-6

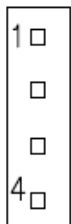
Reset switch: Pins 7-8

J12: Panel Inverter Power Connector



Pin #	Signal Name
1	+12V
2	Ground
3	ENABKL
4	NC
5	+5V

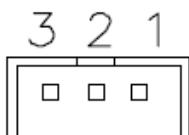
J13: CD-In Audio Connector



Pin #	Signal Name
1	CD Audio R
2	Ground
3	Ground
4	CD Audio L

J14: Wake On LAN Connector

J14 is a 3-pin header for the Wake On LAN function on the CPU card. Wake On LAN will function properly only with an ATX power supply with 5VSB that has 200mA.



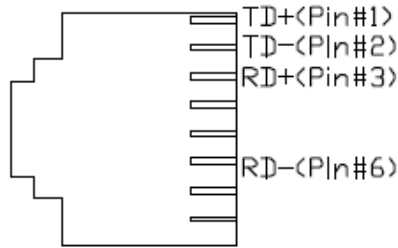
Pin #	Signal Name
1	+5VSB
2	Ground
3	-PME

CN2: Digital 4-in 4-out I/O Connector



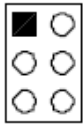
Signal Name	Pin	Pin	Signal Name
Ground	1	2	Vcc
Out3	3	4	Out1
Out2	5	6	Out0
Int3	7	8	Int1
Int2	9	10	Int0

CN6: RJ45 Connector



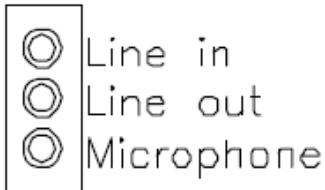
CN7: External Audio Connector

CN7 is a 6-pin header that is used to connect to the optional audio cable card that integrates jacks for Line Out and Mic.



Signal Name	Pin #	Pin #	Signal Name
LINEOUT_R	1	2	LINEOUT_L
Ground	3	4	Ground
MIC 1	5	6	MIC 2

CN8: Line Out, Line In, Mic Connector



3.1 BIOS Setup

This chapter describes the different settings available in the Award BIOS that comes with the board. The items covered are as follows: **BIOS Introduction, BIOS Setup, Standard CMOS Setup, Advanced BIOS Features, Advanced Chipset Features, Integrated Peripherals, Power Management Setup, PNP/PCI Configurations, PC Health Status, Frequency/Voltage Control, Load Fail-Safe Defaults, Load Setup Defaults, Set Supervisor/User Password, Save & Exit Setup, and Exit without Saving.**

BIOS Introduction

The Award BIOS (Basic Input/Output System) installed in your computer system's ROM supports Intel processors. The BIOS provides critical low-level support for standards devices, such as disk drives, serial ports and parallel ports. It also adds virus and password protection as well as special support for fine-tuning the chipset controlling the entire system.

BIOS Setup

The Award BIOS provides a Setup utility program for specifying the system configurations and settings. The BIOS ROM of the system stores the Setup utility. When you on the computer, the Award BIOS is immediately activated. Pressing the **** key immediately allows you to enter the Setup utility. If you are a little bit late to press the **** key, **POST** (Power On Self Test) will continue with its test routines, thus preventing you from invoking the Setup. If you still wish to enter Setup, restart the system by the pressing the "Reset" button or simultaneously pressing the **<Ctrl>**, **<Alt>** and **** keys. You can also restart by turning the system off and back on again. The following message will appear on the screen:

Press **** to Enter Setup

In general, you press the arrow keys to highlight items, **<Enter>** to select, the **<PgUp>** and **<PgDn>** keys to change entries, **<F1>** for help and **<Esc>** to quit.

When you enter the Setup utility, the Main Menu screen will appear on the screen. The Main Menu allows you to select from various Setup functions and exit choices.

Phoenix - AwardBIOS CMOS Setup Utility

Standard CMOS Features	Frequency/Voltage Control
Advanced BIOS Features	Load Fail-Safe Defaults
Advanced Chipset Features	Load Optimized Defaults
Integrated Peripherals	Set Supervisor Password
Power Management Setup	Set User Password
PnP/PCI Configurations	Save & Exit Setup
PC Health Status	Exit Without Saving
ESC : Quit	↑ ↓ → ← : Select Item
F10 : Save & Exit Setup	
Time, Date, Hard Disk Type...	

The section below the Setup items of the Main Menu displays the control keys for this menu. At the bottom of the Main Menu just below the control key section there is another section displaying information on the currently-highlighted item in the list.

Note: If the system cannot boot after making and saving system changes with Setup, the Award BIOS supports an override to the CMOS settings that reset your system to its default.

Warning: It is strongly recommended that you avoid making any changes to the chipset defaults. These defaults have been carefully chosen by both Award and your system manufacturer to provide the absolute maximum performance and reliability. Changing the defaults could cause the system to become unstable and crash in some cases.

3.1.1 Standard CMOS Setup

“Standard CMOS Setup” choice allows you to record some basic hardware configurations in your computer system and set the system clock and error handling. If the motherboard is already installed in a working system, you will not need to select this option. You will need to run the Standard CMOS option; however, if you change your system hardware configurations, the onboard battery fails, or the configuration stored in the CMOS memory was lost or damaged.

CMOS Setup Utility – Copyright ©1984-2001 Award Software
Standard CMOS Features

Date (mm:dd:yy)	Tue, Mar 26 2001	Item Help
Time (hh:mm:ss)	00 : 00 : 00	Menu Level
IDE Primary Master	Press Enter 13020 MB	Change the day, month, Year and century
IDE Primary Slave	Press Enter None	
IDE Secondary Master	Press Enter None	
IDE Secondary Slave	Press Enter None	
Drive A	1.44M, 3.5 in.	
Drive B	None	
Video	EGA/VGA	
Halt On	All Errors	
Base Memory	640K	
Extended Memory	129024K	
Total Memory	130048K	

At the bottom of the menu are the control keys for use on this menu. If you need any help in each item field, you can press the <F1> key. It will display the relevant information to help you. The memory display at the lower right-hand side of the menu is read-only. It will adjust automatically according to the memory changed. The following describes each item of this menu:

Date

The date format is:

Day: Sun to Sat
Month: 1 to 12
Date: 1 to 31
Year: 1994 to 2079

To set the date, highlight the “Date” field and use the PageUp/PageDown or +/- keys to set the current time.

Time

The time format is: **Hour:** **00 to 23**
 Minute: **00 to 59**
 Second: **00 to 59**

To set the time, highlight the “Time” field and use the <PgUp>/<PgDn> or +/- keys to set the current time.

IDE Primary HDDs/IDE Secondary HDDs

The onboard PCI IDE connectors provide Primary and Secondary channels for connecting up to four IDE hard disks or other IDE devices. Each channel can support up to two hard disks; the first is the “Master” while the second, the “Slave”.

Press <Enter> to configure the hard disk. The selections include Auto, Manual, and None. Select “Manual” to define the drive information manually. You will be asked to enter the following items:

CYLS: Number of cylinders
HEAD: Number of read/write heads
PRECOMP: Write precompensation
LANDING ZONE: Landing zone
SECTOR: Number of sectors

The Access Mode selections are as follows:

Auto
Normal (HD<528MB)
Large (for MS-DOS only)
LBA (HD>528MB and supports Logical Block Addressing)

Drive/Drive B

These fields identify the types of floppy disk drive A or drive B that has been installed in the computer. The available specifications are:

360KB	1.2MB	720KB	1.44MB	2.88MB
5.25 in	5.25 in	3.5 in	3.5 in	3.5 in

Video

This field selects the type of video display card installed in your system. You can choose the following video display cards:

EGA/VGA	for EGA, VGA, SEGA, SVGA Or PGA monitor adapters (default)
CGA 40	Power up in 40 column mode
CGA 80	Power up in 80 column mode
MONO	for Hercules or MDA adapters

Halt On

This field determines whether or not the system will halt if an error is detected during power up.

No errors	The system boot will not be halted for any error that may be detected.
All errors	Whenever the BIOS detects a non-fatal error, the system will stop and you will be prompted.
All, but Keyboard	The system boot will not be halted for a keyboard Error; it will stop for all other errors.
All, but Diskette	The system boot will not be halted for a disk error; it will stop for all other errors.
All, but Disk/Key	The system boot will not be halted for a keyboard or disk error; it will stop for all others.

3.1.2 Advanced BIOS Features

This section allows you to configure and improve your system and allows you to set up some system features according to your preference.

CMOS Setup Utility – Copyright ©1984-2001 Award Software
Advanced BIOS Features

		ITEM HELP
Virus Warning	Disabled	Menu Level Allows you choose the VIRUS warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempt to write data into this area, BIOS will show a warning message on screen and alarm beep
CPU L1 and L2 Cache	Enabled	
Quick Power On Self Test	Enabled	
First Boot Device	Floppy	
Second Boot Device	HDD-0	
Third Boot Device	CDROM	
Boot Other Device	Enabled	
Swap Floppy Drive	Disabled	
Boot Up Floppy Seek	Disabled	
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	
APIC Mode	Enabled	
MPS Version Control for OS	1.4	
OS Select For DRAM>64MB	Non-OS2	
Report No FDD For WIN 95	Yes	
Small Logo (EPA) Show	Enabled	

Virus Warning

This item protects the boot sector and partition table of your hard disk against accidental modifications. If an attempt is made, the BIOS will halt the system and display a warning message. If this occurs, you can either allow the operation to continue or run an anti-virus program to locate and remove the problem.

CPU L1 and L2 Cache/CPU L3 Cache

Cache memory is additional memory that is much faster than conventional DRAM (system memory). CPUs from the 486 type on contain internal cache memory, and most modern PCs have additional (external) cache memory. When the CPU request data, the system transfers the requested data from the main DRAM into cache memory, for even faster access by the CPU. These items allow you to enable (speed up memory access) or disable the cache function. By default, these items are Enabled.

Quick Power On Self Test

When enabled, this field speeds up the Power On Self Test (POST) after the system is turned on. If it is set to Enabled, BIOS will skip some items.

First/Second/Third Boot Device

These fields determine the drive that the system searches first for an operating system. The options available include Floppy, LS/ZIP, HDD-0, SCSI, CDROM, HDD-1, HDD-2, HDD-3, LAN and Disable.

Boot Other Device

These fields allow the system to search for an OS from other devices other than the ones selected in the First/Second/Third Boot Device.

Swap Floppy Drive

This item allows you to determine whether or not to enable Swap Floppy Drive. When **enabled**, the BIOS swaps floppy drive assignments so that Drive A becomes Drive B, and Drive B becomes Drive A. By default, this field is set to **Disabled**.

Boot Up Floppy Seek

This feature controls whether the BIOS checks for a floppy drive while booting up. If it cannot detect one (either due to improper configuration or its absence), it will flash an error message.

Boot Up NumLock Status

This allows you to activate the NumLock function after you power up the system.

Gate A20 Option

This field allows you to select how Gate A20 is worked. Gate A20 is a device used to address memory above 1MB.

Typematic Rate Setting

When **disabled**, continually holding down a key on your keyboard will generate only one instance. When enabled, you can set the two typematic controls listed next. By default, this field is set to **Disabled**.

Typematic Rate (Chars/Sec)

When the typematic rate is enabled, the system registers repeated keystroke speeds. Settings are from 6 to 30 characters per second.

Typematic Delay (Msec)

When the typematic rate is enabled, this item allows you to set the time interval for displaying the first and second characters. By default, this item is set to 250msec.

Security Option

This field allows you to limit access to the System and Setup. The default value is Setup. When you select System, the system prompts for the User Password every time you boot up. When you select Setup, the system always boots up and prompts for the Supervisor Password only when the Setup utility is called up.

APIC Mode

APIC stands for Advanced Programmable Interrupt Controller. The default setting is **Enabled**.

MPS Version Control for OS

This option specifies the MPS (Multiprocessor Specification) version for your operating system. MPS version 1.4 added extended configuration tables to improve support for multiple PCI bus configurations and improve future expandability.

OS Select for DRAM >64MB

This option allows the system to access greater than 64MB of DRAM memory when used with OS/2. That has to depend on certain BIOS calls to access memory. The default setting is Non-OS/2.

Report No FDD for WIN 95

If you are using Windows 95/98 without a floppy disk drive, select **Enabled** to release IRQ6. This is required to pass Windows 95/98's SCT test. You should also disable the Onboard FDC Controller in the Integrated Peripherals screen when there is no floppy drive in the system. If you set this feature to **Disabled**, the BIOS will not report the missing floppy drive to Win95/98.

Small Logo (EPA) Show

The EPA logo appears at the right side of the monitor screen when the system is boot up. The default setting is **Enabled**.

3.1.3 Advanced Chipset Features

This Setup menu controls the configuration of the chipset.

CMOS Setup Utility – Copyright ©1984-2001 Award Software
Advanced Chipset Features

		ITEM HELP
DRAM Timing Selectable	By SPD	Menu Level
CAS Latency Time	2.5	
Active to Precharge Delay	6	
DRAM RAS# to CAS# Delay	3	
DRAM RAS# Precharge	3	
Turbo Mode	Disabled	
Memory Frequency For	Auto	
System BIOS Cacheable	Enabled	
Video BIOS Cacheable	Enabled	
Delayed Transaction	Enabled	
Delay Prior to Thermal	16 Min	
AGP Aperture Size (MB)	64	
** On-Chip VGA Setting **		
On-Chip VGA	Enabled	
On-Chip Frame Buffer Size	8MB	
Boot Display	Auto	
Panel Scaling	Auto	
Panel Type	800x600 LVDS	
TV Standard	Off	
Video Connector	Automatic	
TV Format	Auto	

DRAM Timing Selectable

This option refers to the method by which the DRAM timing is selected. The default is **By SPD**.

CAS Latency Time

You can select CAS latency time in HCLKs of 2/2 or 2.5 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 field unless you change specifications of the installed DRAM or the installed CPU. The choices are 2 and 3.

Active to Precharge Delay

The default setting for the Active to Precharge Delay is 6.

DRAM RAS# to CAS# Delay

This option allows you to insert a delay between the RAS (Row Address Strobe) and CAS (Column Address Strobe) signals. This delay occurs when the SDRAM is written to, read from or refreshed. Reducing the delay improves the performance of the SDRAM.

DRAM RAS# Precharge

This option sets the number of cycles required for the RAS to accumulate its charge before the SDRAM refreshes. The default setting for the Active to Precharge Delay is 3.

Memory Frequency For

This field sets the frequency of the DRAM memory installed. The default setting is Auto. The other settings are DDR200 and DDR266.

System BIOS Cacheable

The setting of **Enabled** allows caching of the system BIOS ROM at F000h-FFFFh, resulting in better system performance. However, if any program writes to this memory area, a system error may result.

Video BIOS Cacheable

The **Enabled** setting allows caching of the video BIOS ROM at C0000h-F7FFFh, resulting in better video performance. However, if any program writes to this memory area, a system error may result.

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.

Delay Prior to Thermal

This field activates the CPU thermal function after the system boots for the set number of minutes. The options are 16 min or 64 min.

AGP Aperture Size

The field sets aperture size of the graphics. 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. The default setting is 64M.

On-Chip VGA

By default, the On-Chip VGA or chipset-integrated VGA is **Enabled**.

On-Chip Frame Buffer Size

The On-Chip Frame Buffer Size can be set to 1MB or 8MB. This memory is shared with the system memory.

Boot Display

Boot Display determines the display output device where the system boots. The options are Auto, CRT and TV.

Panel Scaling

Setting this field to choose the initial state of Panel Fitting. A new state will overwrite the initial state

and be remembered if Panel Fitting HotKey is requested. Panel Fitting can only be enabled when in LFP only display. This panel fitting state is checked to update the hardware status after changing Video mode or Switching Display Devices.

Panel Type

This field sets panel type with the resolution and interface information. The default setting is 800x600 LVDS.

TV Standard

This field sets the TV Standard as NTSC, PAL, SECAM or can be set OFF. The default setting is **Off**.

Video Connector

The default setting is **Automatic**.

TV Format

The default setting is **Auto**.

Integrated Peripherals

This section sets configurations for your hard disk and other integrated peripherals. The first screen shows three main items for user to select. Once an item is selected, a submenu appears. Details follow.

CMOS Setup Utility – Copyright ©1984-2001 Award Software
Integrated Peripherals

On-Chip Primary PCI IDE	Enabled	ITEM HELP
IDE Primary Master PIO	Auto	Menu Level
IDE Primary Slave PIO	Auto	
IDE Primary Master UDMA	Auto	
IDE Primary Slave UDMA	Auto	
On-Chip Secondary PCI IDE	Enabled	
IDE Secondary Master PIO	Auto	
IDE Secondary Slave PIO	Auto	
IDE Secondary Master UDMA	Auto	
IDE Secondary Slave UDMA	Auto	
USB Controller	Enabled	
USB 2.0 Controller	Disabled	
USB Keyboard Support	Disabled	
AC97 Audio	Auto	
Init Display First	PCI Slot	
IDE HDD Block Mode	Enabled	
POWER ON Function	BUTTON Only	
Onboard FDC Controller	Enabled	
Onboard Serial Port 1	3F8/IRQ4	
Onboard Serial Port 2	2F8/IRQ3	
UART Mode Select	Normal	
Onboard Parallel Port	378/IRQ7	
Parallel Port Mode	SPP	
PWRON After PWR-Fail	Off	
Onboard Serial Port 3	3E8H	
Serial Port 3 Use IRQ	IRQ10	
Onboard Serial Port 4	2E8H	
Serial Port 4 Use IRQ	IRQ11	

OnChip 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.

IDE Primary/Secondary Master/Slave PIO

These fields allow your system hard disk controller to work faster. Rather than have the BIOS issue a

series of commands that transfer to or from the disk drive, PIO (Programmed Input/Output) allows the BIOS to communicate with the controller and CPU directly.

The system supports five modes, numbered from 0 (default) to 4, which primarily differ in timing. When Auto is selected, the BIOS will select the best available mode.

IDE Primary/Secondary Master/Slave UDMA

These fields allow your system to improve disk I/O throughput to 33Mb/sec with the Ultra DMA/33 feature. The options are Auto and Disabled.

USB Controller

The options for this field are Enabled and Disabled. By default, this field is set to **Enabled**.

USB 2.0 Controller

The options for this field are Enabled and Disabled. By default, this field is set to **Disabled**. In order to use USB 2.0, necessary OS drivers must be installed first.

USB Keyboard Support

The options for this field are Enabled and Disabled. By default, this field is set to **Disabled**.

AC97 Audio

The default setting is **Auto**.

Init Display First

This field allows the system to initialize first the VGA card on chip or the display on the PCI slot. By default, the PCI slot is initialized first.

IDE HDD Block Mode

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

Power On Function

This field shows how the system can be powered on from the Off state. The default setting is **Button Only**.

Onboard FDC Controller

Select Enabled if your system has a floppy disk controller (FDC) installed on the motherboard and you wish to use it. If you install an add-in FDC or the system has no floppy drive, select Disabled in this field. This option allows you to select the onboard FDD port.

Onboard Serial/Parallel Port

These fields allow you to select the onboard serial and parallel ports and their addresses. The default values for these ports are:

Serial Port 1	3F8/IRQ4
Serial Port 2	2F8/IRQ3
Serial Port 3	3E8H/IRQ10
Serial Port 4	2E8H/IRQ11
Parallel Port	378H/IRQ7

UART Mode Select

This field determines the UART 2 mode in your computer. The default value is **Normal**. Other options include IrDA and ASKIR.

Parallel Port Mode

This field allows you to determine parallel port mode function

SPP	Standard Printer Port
EPP	Enhanced Parallel Port
ECP	Extended Capabilities Port

PWRON After PWR-Fail

This field sets the system power status whether on or off when power returns from a power failure situation.

3.1.4 Power Management Setup

The Power Management Setup allows you to save energy of your system effectively.

CMOS Setup Utility – Copyright ©1984-2001 Award Software
Power Management Setup

ACPI Function	Enabled	ITEM HELP
Power Management	User Define	Menu Level
Video Off Method	DPMS	
Video Off In Suspend	Yes	
Suspend Type	Stop Grant	
Modem Use IRQ	3	
Suspend Mode	Disabled	
HDD Power Down	Disabled	
Soft-Off by PWR-BTTN	Instant-Off	
CPU THRM-Throttling	50%	
Power On by Ring	Disabled	
Resume by Alarm	Disabled	
Date (of Month) Alarm	0	
Time (hh:mm:ss) Alarm	0 : 0 : 0	
** Reload Global Timer Events **		
Primary IDE 0	Disabled	
Primary IDE 1	Disabled	
Secondary IDE 0	Disabled	
Secondary IDE 1	Disabled	
FDD, COM, LPT Port	Disabled	
PCI PIRQ[A-D] #	Disabled	

ACPI Function

Enable this function to support ACPI (Advance Configuration and Power Interface).

Power Management

This field allows you to select the type of power saving management modes. There are four selections for Power Management.

Min. Power Saving	Minimum power management
Max. Power Saving	Maximum power management
User Define	Each of the ranges is from 1min to 1hr. Except for HDD Power Down which ranges from 1 min to 15 min.

Video Off Method

This field defines the Video Off features. There are three options.

V/H SYNC + Blank	Default setting, blank the screen and turn off Vertical and horizontal scanning
DPMS	Allows BIOS to control the video display.
Blank Screen	Writes blanks to the video buffer

Video Off In Suspend

When enabled, the video is off in suspend mode. The default setting is **Yes**.

Suspend Type

The default setting for the Suspend Type field is **Stop Grant**.

Modem Use IRQ

This field sets the IRQ used by the Modem. By default, the setting is **3**.

Suspend Mode

When enabled, and after the set time of system inactivity, all devices except the CPU will be shut off.

HDD Power Down

When enabled, and after the set time of system inactivity, the hard disk drive will be powered down while all other devices remain active.

Soft-Off by PWRBTN

This field defines the power-off mode when using an ATX power supply. The Instant Off mode allows powering off immediately upon pressing the power button. In the Delay 4 Sec mode, the system powers off when the power button is pressed for more than four seconds or enters the suspend mode when pressed for less than 4 seconds.

CPU THRM-Throttling

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.

Power On by Ring

This field enables or disables the power on of the system through the modem connected to the serial port or LAN.

Resume by Alarm

This field enables or disables the resumption of the system operation. When enabled, the user is allowed to set the Date and Time.

Reload Global Timer Events

The HDD, FDD, COM, LPT ports and PCI PIRQ are I/O events that can prevent the system from entering a power saving mode or can awaken the system from such a mode. 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.

3.1.5 PnP/PCI Configurations

This option configures the PCI bus system. All PCI bus systems on the system use INT#, thus all installed PCI cards must be set to this value.

CMOS Setup Utility – Copyright ©1984-2001 Award Software
PnP/PCI Configurations

Reset Configuration Data	Disabled	ITEM HELP
Resources Controlled By	Auto (ESCD)	Menu Level
IRQ Resources	Press Enter	Default is Disabled.
DMA Resources	Press Enter	Select Enabled to reset Extended System Configuration Data (ESCD) when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the OS cannot boot
PCI/VGA Palette Snoop	Disabled	

Reset Configuration Data

This field allows you to determine whether to reset the configuration data or not. The default value is **Disabled**.

Resources Controlled by

This PnP BIOS can configure all of the boot and compatible devices automatically with the use of an PnP operating system such as Windows 95.

PCI/VGA Palette Snoop

Some non-standard VGA display cards may not show colors properly. This field allows you to set whether or not MPEG ISA/VESA VGA cards can work with PCI/VGA. When this field is enabled, a PCI/VGA can work with PCI/VGA. When this field is enabled, a PCI/VGA can work with an MPEG

ISA/VESA VGA card. When this field is disabled, a PCI/VGA cannot work with an MPEG/VESA card.

3.1.6 PC Health Status

This section shows the parameters in determining the PC Health Status. These parameters include temperatures, fan speeds and voltages.

CMOS Setup Utility – Copyright ©1984-2001 Award Software
PC Health Status

		ITEM HELP
CPU Warning Temperature	Disabled	
Current CPU Temp.	32°C/89°F	
Current System Temp.	39°C/102°F	
CPU FAN Speed	4166 RPM	
Chassis FAN1 Speed	0 RPM	
Chassis FAN2 Speed	0 RPM	
Vcore (V)	1.63V	
VCC3(V)	3.37V	
+5(V)	5.05V	
+12(V)	12.09V	
-12(V)	(-)12.03V	
VBAT(V)	3.21V	
5VSB(V)	5.05V	
Shutdown Temperature	Disabled	
CPU Fan Failure Warning	Disabled	
Sys. Fan Failure Warning	Disabled	
Aux. Fan Failure Warning	Disabled	

3.1.7 Load Fail-Safe Defaults

This option allows you to load the troubleshooting default values permanently stored in the BIOS ROM. These default settings are non-optimal and disable all high-performance features.

3.1.8 Load Optimized Defaults

This option allows you to load the default values to your system configuration. These default settings are optimal and enable all high performance features.

3.1.9 Set Supervisor Password

These two options set the system password. Supervisor Password sets a password that will be used to protect the system and Setup utility. User Password sets a password that will be used exclusively

on the system. To specify a password, highlight the type you want and press **<Enter>**. The Enter password: message prompts on the screen. Type the password, up to eight characters in length, and press **<Enter>**. The system confirms your password by asking you to type it again. After setting a password, the screen automatically returns to the main screen.

To disable a password, just press the **<Enter>** key when you are prompted to enter the password. A message will confirm the password to be disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

3.1.10 Save & Exit Setup

This option allows you to determine whether or not to accept the modifications. If you type “Y”, you will quit the Setup utility and save all changes into the CMOS memory. If you type “N”, you will return to Setup utility.

3.1.11 Exit without Saving

Select this option to exit the Setup utility without saving the changes you have made in this section. Typing “Y” will quit the Setup utility without saving the modifications. Typing “N” will return you to Setup utility.

Chapter 4 Installation of Drivers

This chapter describes the installation procedures for software and drivers under the Windows 98, Windows NT4.0, Windows 2000. The software and drivers are included with the motherboard. The contents include **Intel Chipset Software Installation Utility, Intel 845GV Chipset Graphics Driver Installation, Realtek AC97 Codec Audio Driver Installation, and Realtek RTL8100 LAN Drivers Installation.**

Important Note:

After installing your Windows operating system (Windows 98/98SE/ME/2000/XP), you must install first the Intel Chipset Software Installation Utility before proceeding with the installation of drivers.

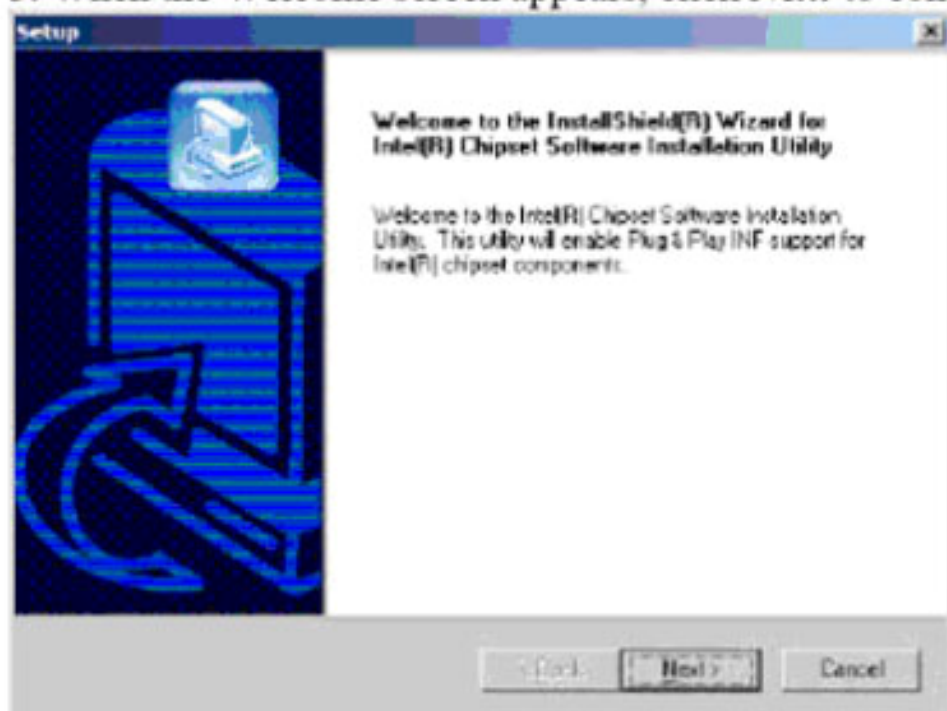
Intel Chipset Software Intallation Utility

The Intel Chipset Drivers should be installed first before the software drivers to enable Plug & Play INF support for Intel chipset components. Follow the instructions below to complete the installation under Windows 98SE/ME/2000/XP.

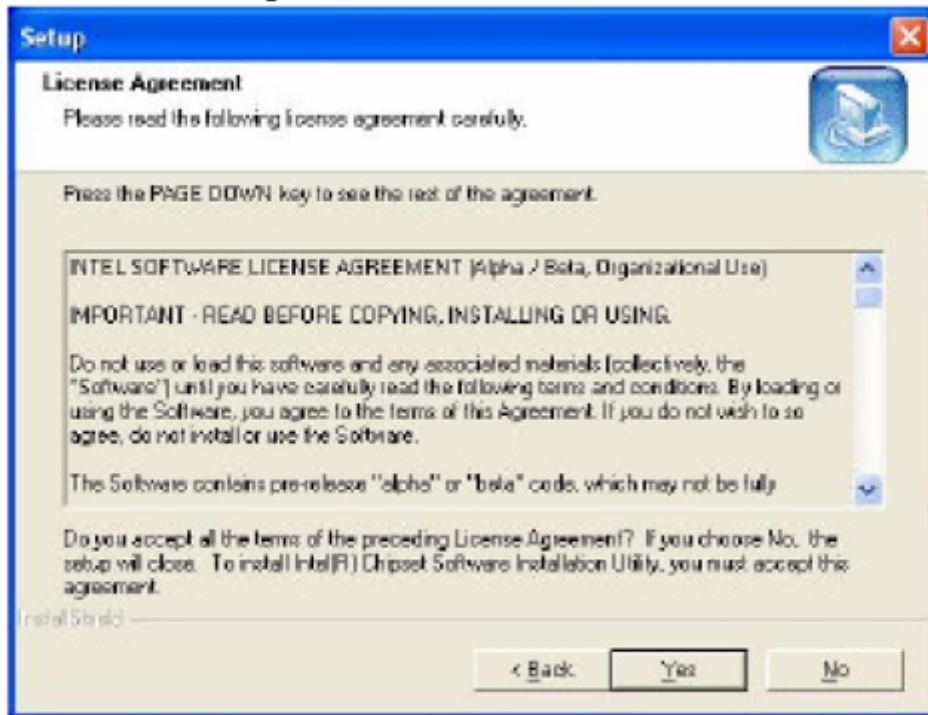
1. Insert the CD that comes with the board. Click *Intel Chipsets* and then *Intel(R) 855GME Chipset Drivers*.
2. Click *Intel(R) Chipset Software Installation Utility*.



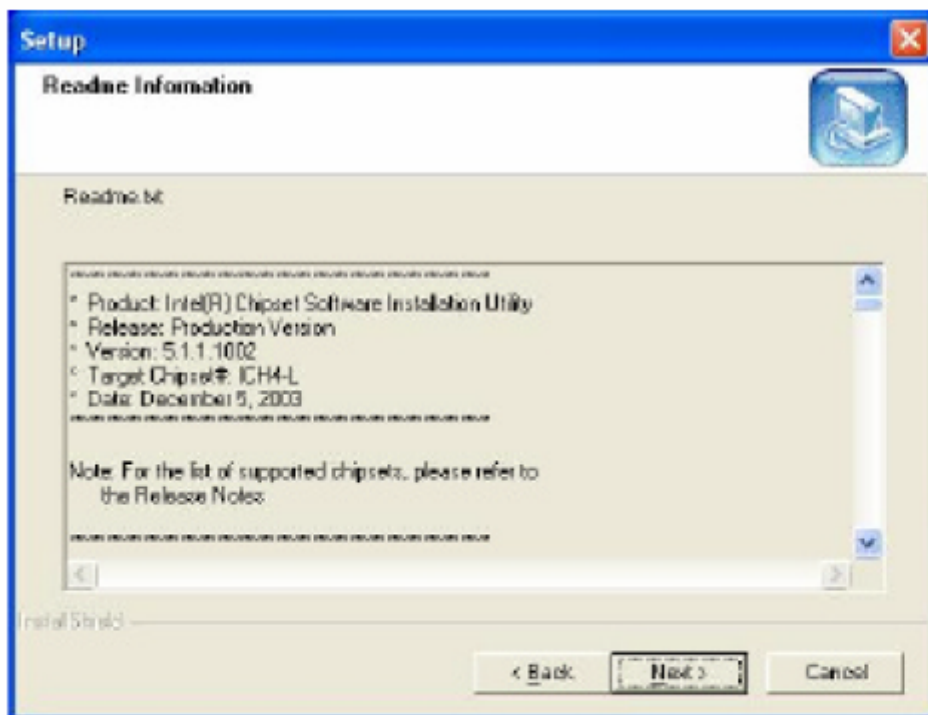
3. When the Welcome screen appears, click *Next* to continue.



4. Click *Yes* to accept the software license agreement and proceed with the installation process.



5. On Readme Information screen, click *Next* to continue the installation.



6. The Setup process is now complete. Click *Finish* to restart the computer and for changes to take effect. When the computer has restarted, the system will be able to find some devices. Restart your computer when prompted.



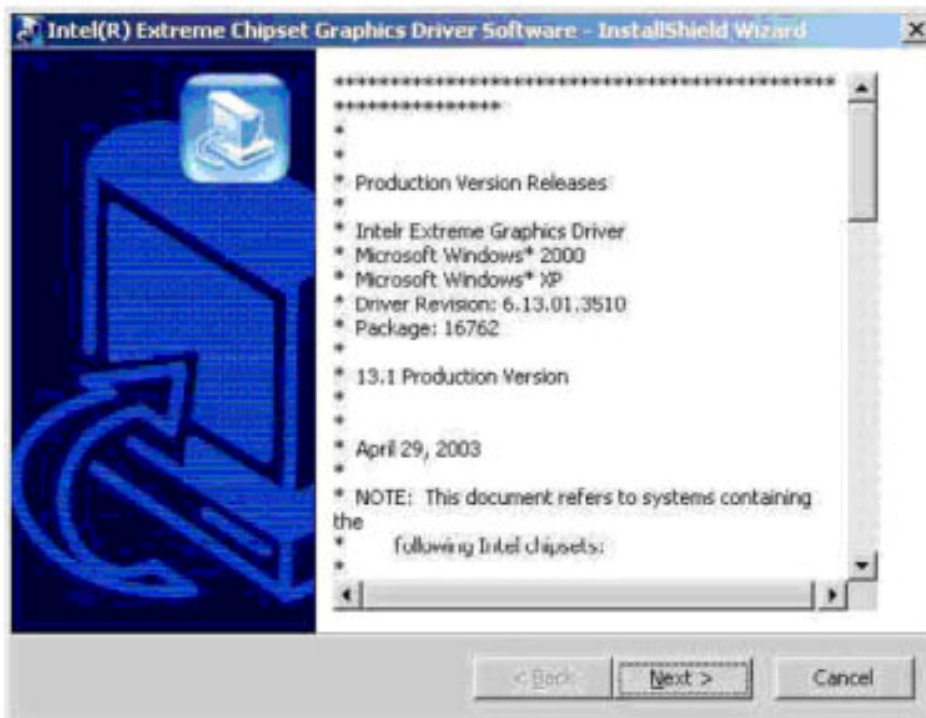
Intel 845GV Chipset Graphics Driver Installation

Follow the steps below to install the Intel 845GV graphics driver under Windows 98/98SE/ME/2000/XP/NT 4.0.

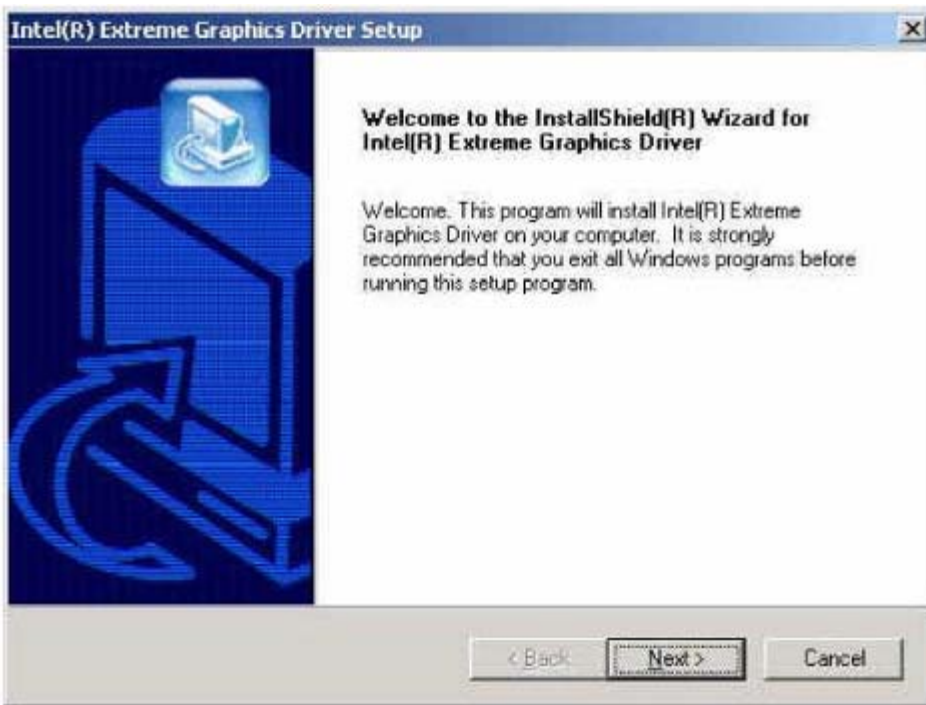
1. Insert the CD that comes with the motherboard. Click Intel Chipsets on the left side of the screen. Then select, Intel 845GV Chipset Drivers, then Intel 845G Family Graphics Driver.



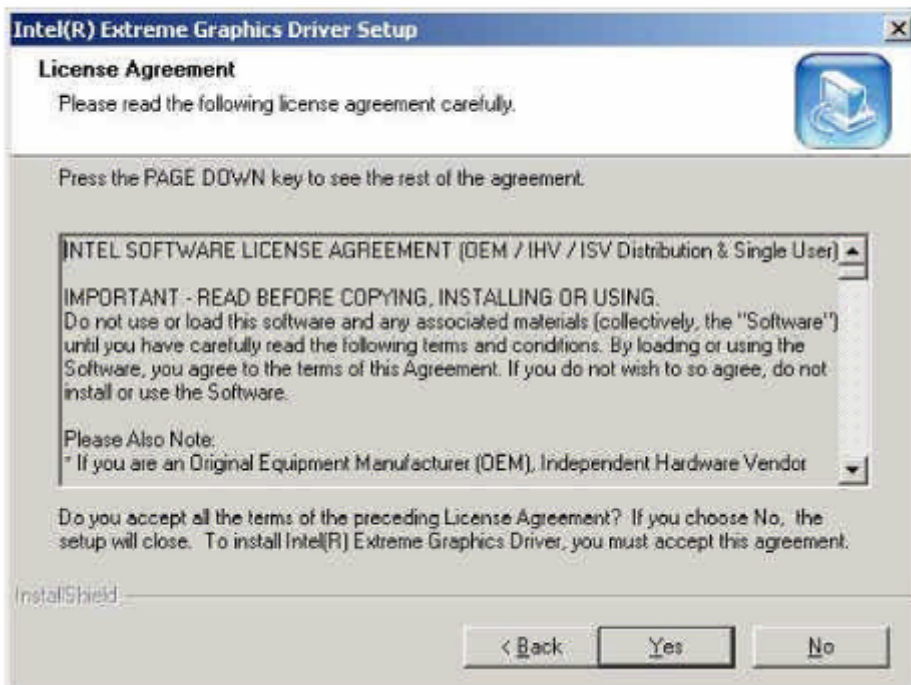
2. Click Next to continue.



3. When the Welcome screen appears, click Next to continue.



3. Click Yes to accept the software license agreement and proceed with the installation process.



4. The Setup process is now complete. Click Finish to restart the computer and for changes to take effect. Restart your computer when prompted.



AC97 Codec Audio Driver Installation

Follow the steps below to install the AC97 Codec Audio Drivers.

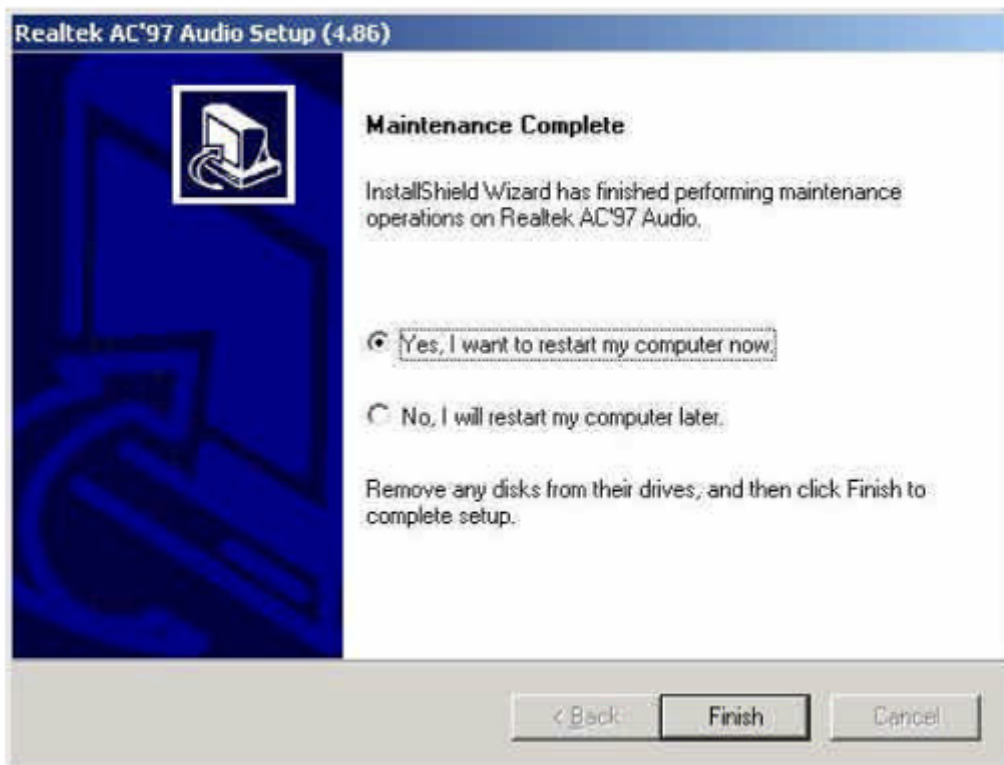
1. Insert the CD that comes with the CPU card and the screen below would appear. Click Intel Chipsets. Click AC97 Codec Audio Drive start the drivers installation.



2. Click Yes to continue the installation.



3. Click Finish to restart the computer and for changes to take effect.



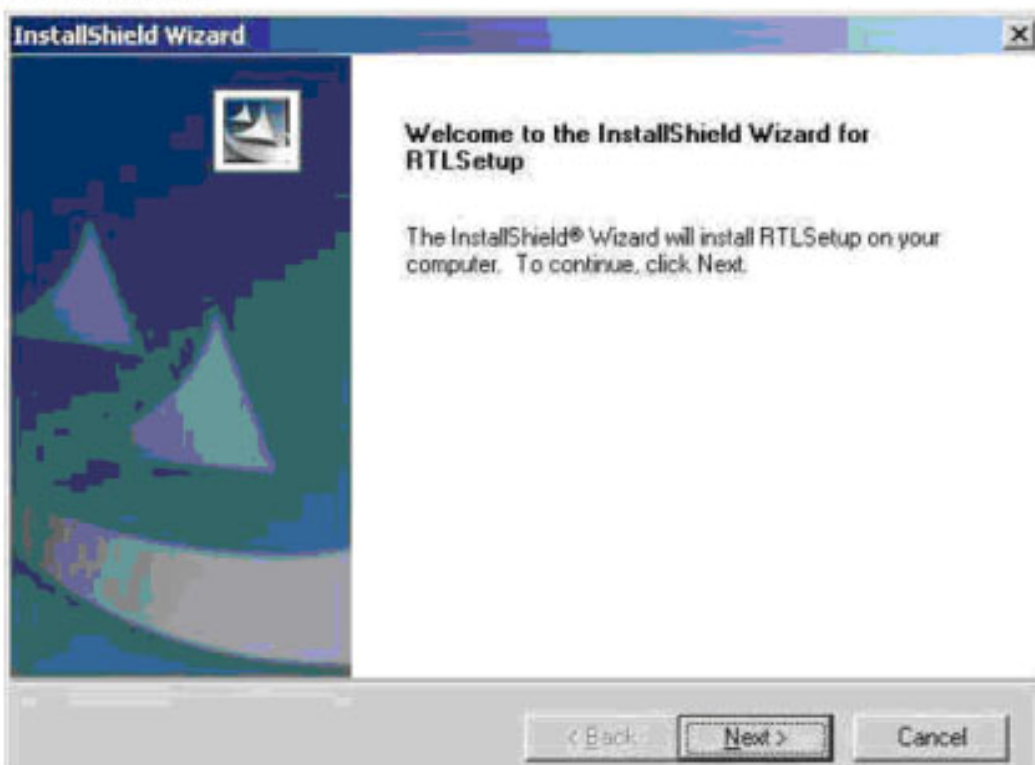
Realtek RTL8139 LAN Drivers Installation

Follow the steps below to start installing the Realtek LAN drivers.

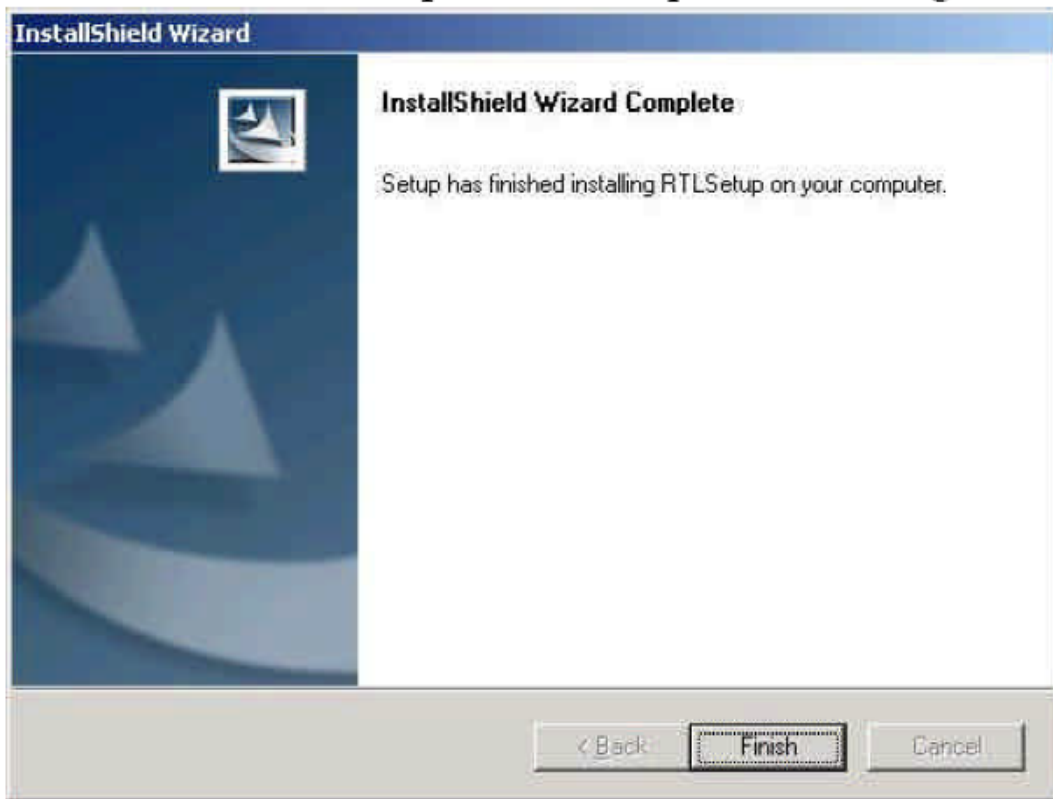
1. Insert the CD that comes with the CPU. In the initial screen, click on LAN Card on the left side. Then, select Realtek RTL8139x LAN Drivers.



2. When the Welcome screen appears, click Next to start the drivers installation.



3. Click Finish to complete the setup and for changes to take effect.



Chapter 5 Touch Screen Installation

5.1 Introduction to Touch Screen Controller Board

The control board is configured for use with the RS-232 interface. It connects to the touch screen, power supply and computer system's RS-232 port, and supports 4-, 5- and 8-wire touch screens. The control board has some advanced functions, such as PnP and non-PnP mode adjustable baud rate, thus making easy for customers to select different touch screens without changing the control board. The size of the board is 25 by 60mm, and it has two connectors and one dipswitch on-board.



Figure 5.1: Bird's Eye View of Control Board

5.2 Windows 2000/XP Driver Installation for Control Board

Before installing the Windows 2000/XP driver software, you must have the Windows 2000/XP system installed and running on your computer. You must also have the 9036 PenMount Serial Interface controller board installed. Contents of the PenMount Windows 2000/XP driver folder are listed below:

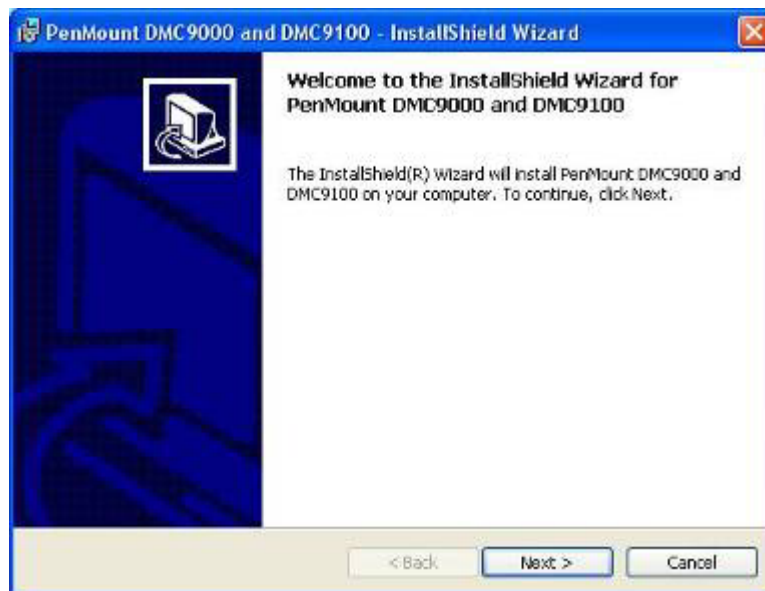
DMC9000.inf
DMC9000.sys
DMC9000.cat
SETUP.EXE

If you have an older version of the PenMount Windows 2000/XP driver installed in your system, please remove it first. Follow the steps below to install the PenMount Windows 2000/XP driver.

1. When the system first detects the controller board, a screen appears that shows “Unknown Device”. Do not use this hardware wizard. Press Cancel.
2. Insert the TOPSCCC product cd install **setup.exe**. the screen below would appear.
Click touch panel driver



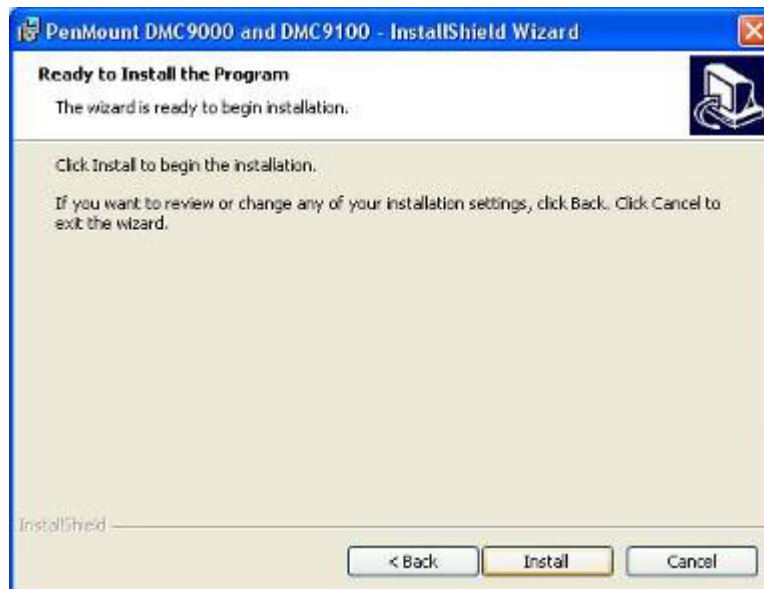
3. The screen displays the installation wizard for the PenMount software. Click “Next”.



3.1 A License Agreement appears. Click “I accept...” and “Next”



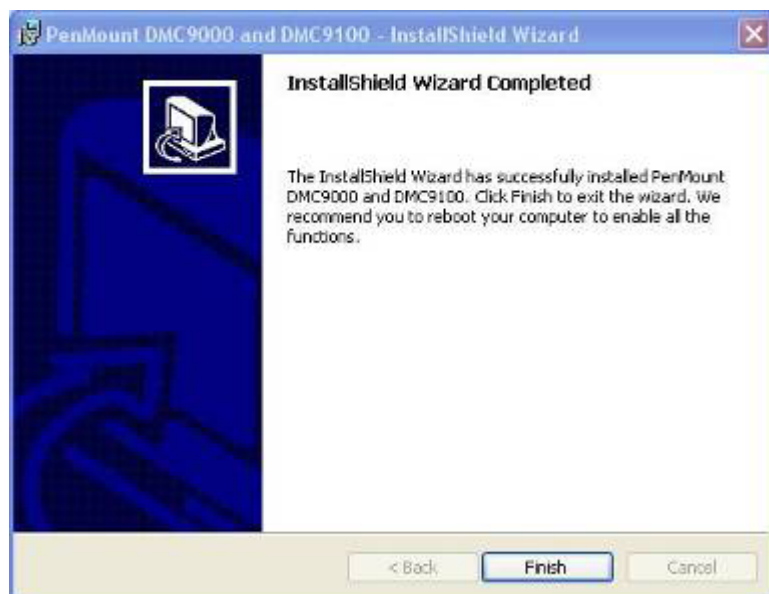
4. The “Ready to Install the Program” screen appears. Select “Install”.



5. The next screen is “Hardware Installation”. Select “Continue Anyway”.



6. The “InstallShield Wizard Completed” appears. Click “Finish”.



5.3 Configuring the PenMount Windows 2000/XP Driver

Upon rebooting, the computer automatically finds the new 9036 controller board. The touch screen is connected but not calibrated. Follow the procedures below to carry out calibration.

1. After installation, click the PenMount Monitor icon “PM” in the menu bar.
2. When the PenMount Control Panel appears, click “Calibrate”.

PenMount Control Panel

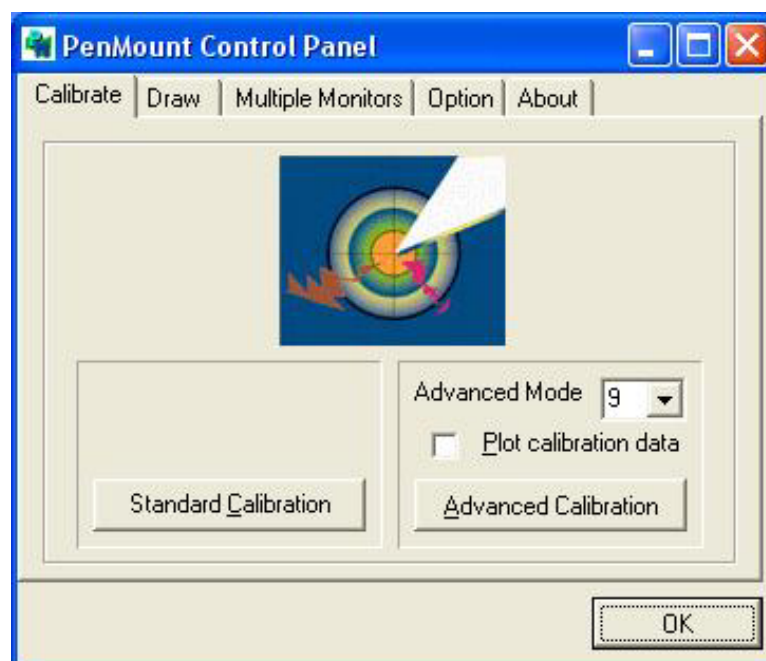
The functions of the PenMount Control Panel are **Calibrate**, **Draw**, **Multiple Monitors**, **Option**, and **About**, which are explained in the following sections.

Calibrate

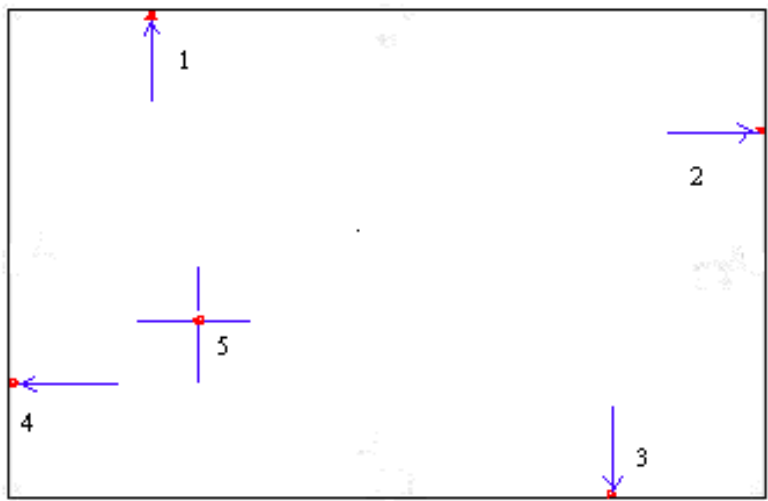
This function offers two ways to calibrate your touch screen. “Standard Calibration” adjusts most touch screens. “Advanced Calibration” adjusts aging touch screens.

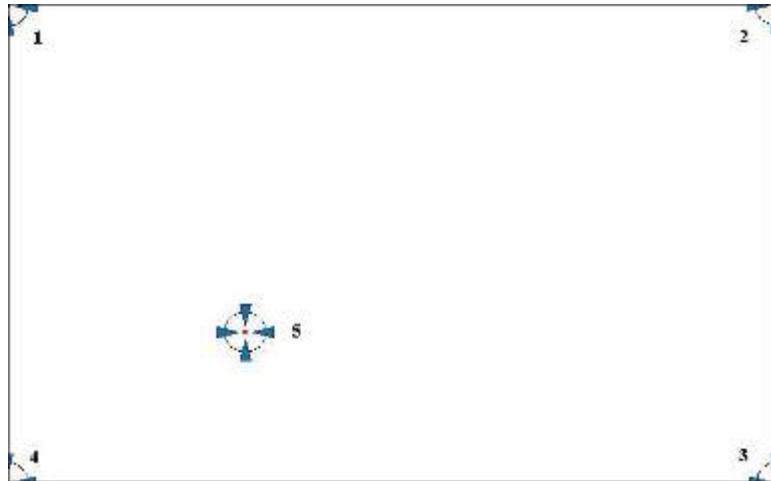
Standard Calibration **Click this button and arrows appear pointing to red squares. Use your finger or stylus to touch the red squares in sequence. After the fifth red point calibration is complete. To skip, press ‘ESC’.**

Advanced Calibration **Advanced Calibration uses 4, 9, 16 or 25 points to effectively calibrate touch panel linearity of aged touch screens. Click this button and touch the red squares in sequence with a stylus. To skip, press ‘ESC’.**



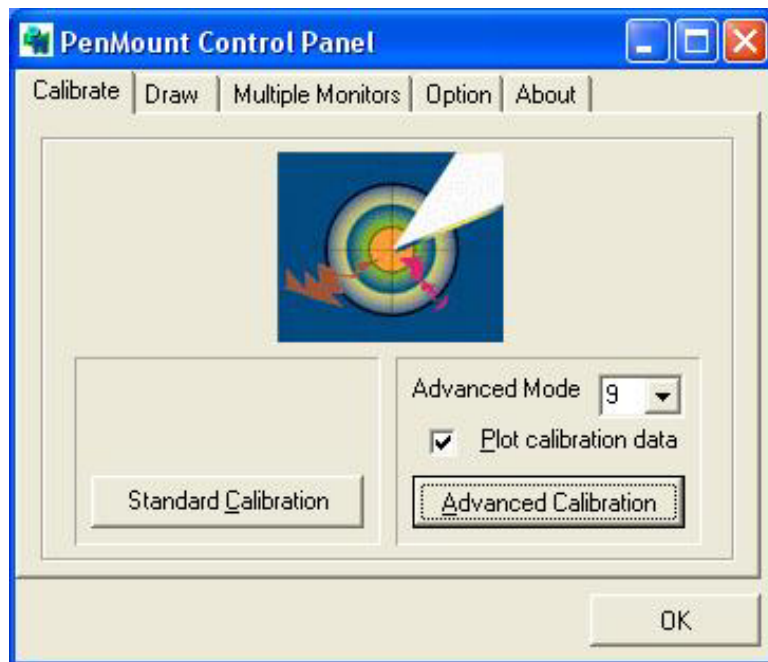
NOTE: The older the touch screen is, the more Advanced Mode calibration points you need for an accurate calibration. Use a stylus during Advanced Calibration for greater accuracy.





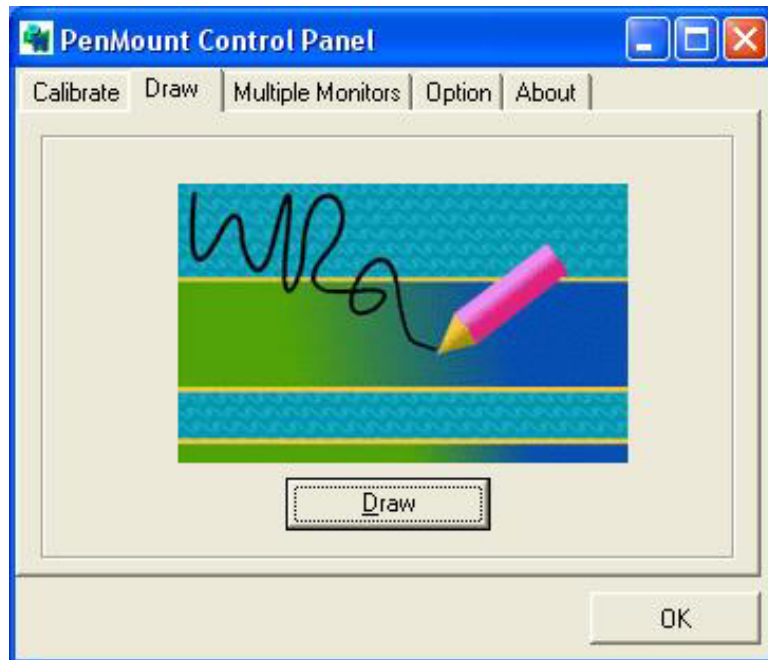
Plot Calibration Data

Check this function and a touch panel linearity comparison graph appears when you have finished Advanced Calibration. The blue lines show linearity before calibration and black lines show linearity after calibration.

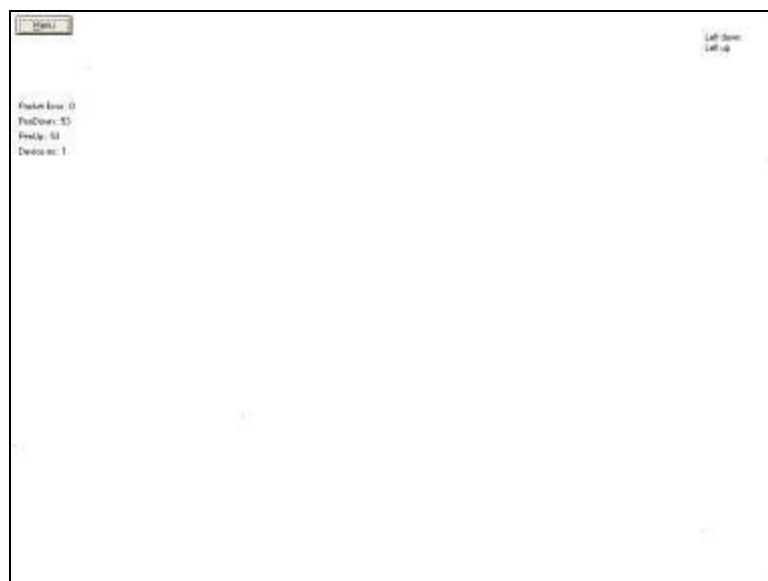


Draw

Tests or demonstrates the PenMount touch screen operation. The display shows touch location. Click **Draw** to start. Touch the screen with your finger or a stylus and the drawing screen will register touch activity such as **left**, **right**, **up**, **down**, **pen up**, and **pen down**.



Touch the screen with your finger or a stylus and the drawing screen will register touch activity such as **left**, **right**, **up**, **down**, **pen up**, and **pen down**.

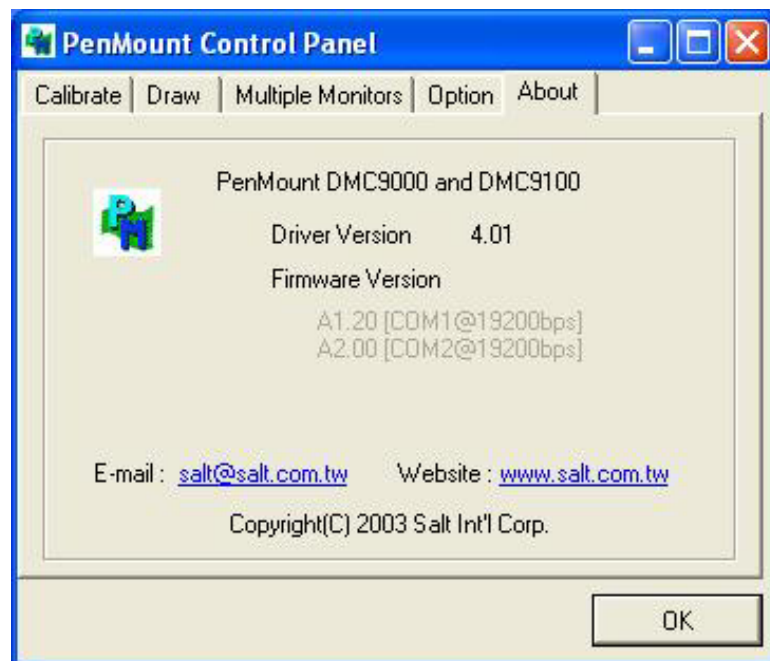


Click Clear Screen to clear the drawing.



About

This panel displays information about the PenMount controller and this driver version.



PenMount Monitor Menu Icon

The PenMount monitor icon (PM) appears in the menu bar of Windows 2000/XP system when you turn on the PenMount Monitor in the PenMount Utilities.

The PenMount Monitor has the following functions:

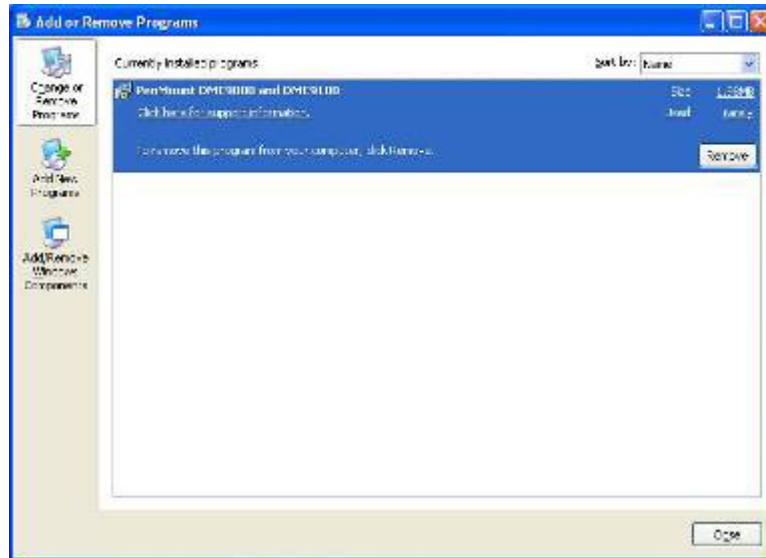


- Beep **Turns beep on or off.**
- Right Button **When you select this function, a mouse icon appears in the right-bottom of the screen. Click this icon to switch between Right and Left Button functions.**
- Pen Stabilizer **Check this function to reduce cursor vibration for relatively unstable touch screens, or where there may be excess vibration. Normally this function is not checked.**
- Exit **Exits the PenMount Monitor function.**

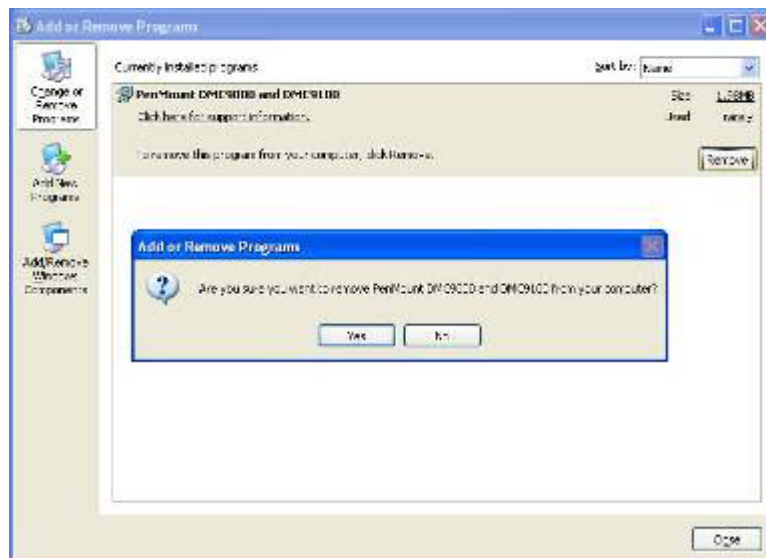


5.5 Uninstall the PenMount Windows 2000/XP Driver

1. Exit the PenMount monitor (PM) in the menu bar.
2. Go to **Settings**, then **Control Panel**, and then click **Add/Remove program**. Select **PenMount DMC9000** and click the **Add/Remove** button.



3. Select **PenMount DMC9000** and **DMC9100**. Click the **Remove** button.



4. Select "Yes" and "Close" to remove the PenMount Windows 2000/XP driver, and reboot the system.

Appendix A:

A. Panel Mounting

The EX-93211/93511/93711/93911 panel PC is designed to be panel-mounted as shown in Figure A. Just carefully place the unit through the hole and tighten the given 8 screws from the rear to secure the mounting.

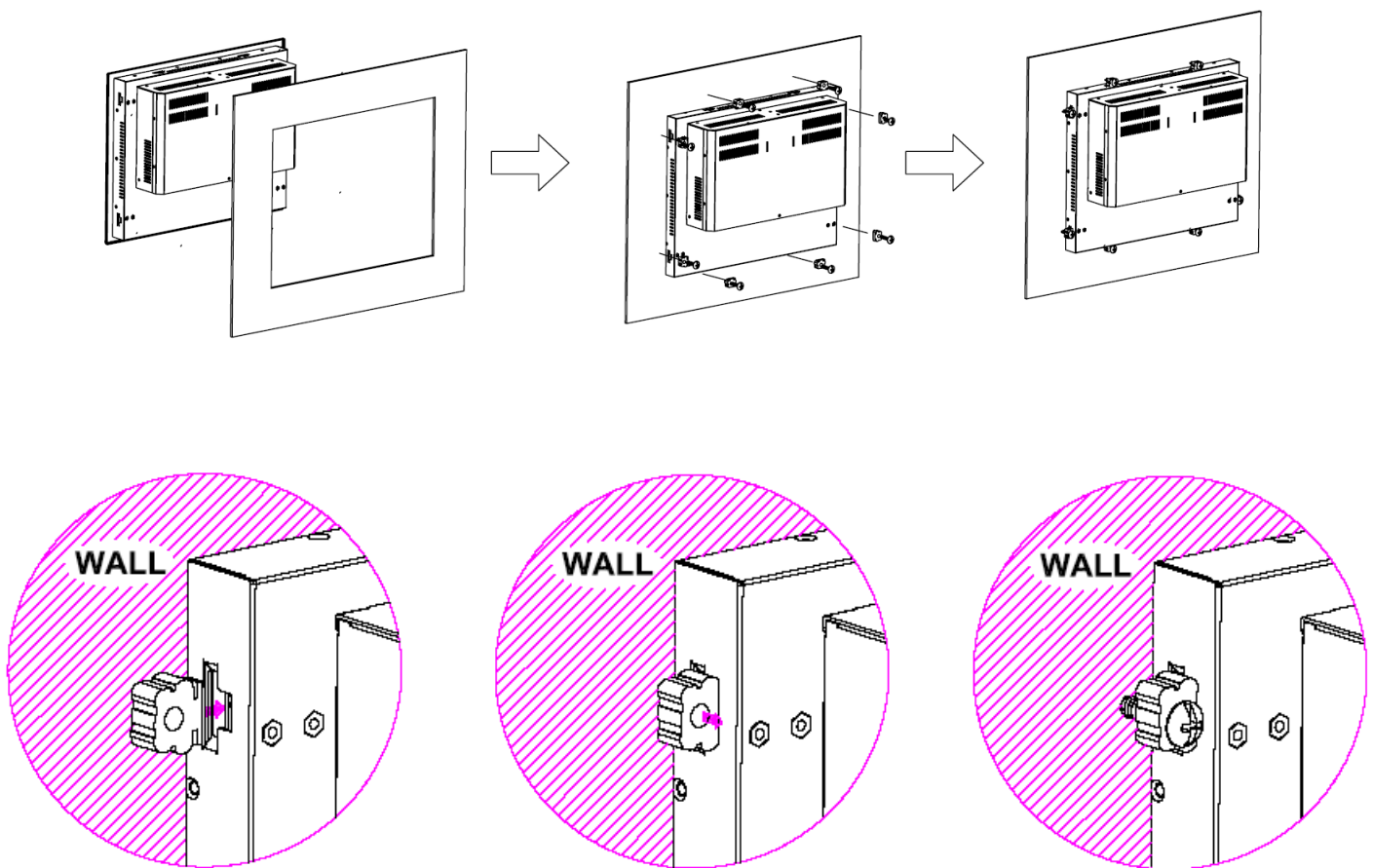


Figure A: Panelmounting of the EX-93211/93511/93711/93911

B. Rack Mounting (optional)

The EX-93211/93511/93711/93911 panel PC can be rack-mounted as an option. Just carefully slide it into the rack and tighten the given 8 screws from the front to secure the mounting as shown in Figure B.

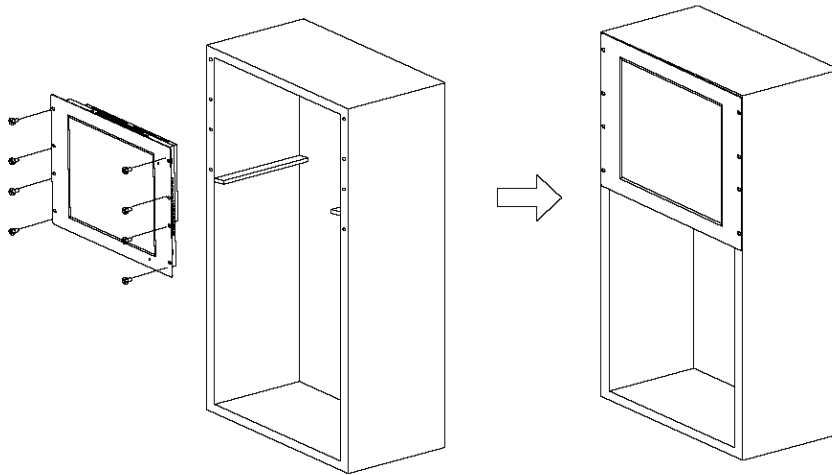


Figure B: Rackmounting of the EX-93211/93511/93711/93911