

AMB-2000HT(T)-E

10.4" Fan-less

Industrial Panel PC

Copyright Notice

This document is copyrighted, 2003. All rights are reserved. The original manufacturer reserves the right to make improvements to the products described in this manual at any time without notice.

No part of this manual may be reproduced, copied, translated, or transmitted in any form or by any means without the prior written permission of the original manufacturer. Information provided in this manual is intended to be accurate and reliable. However, the original manufacturer assumes no responsibility for its use, nor for any infringements upon the rights of third parties, which may result from its use.

The material in this document is for product information only and is subject to change without notice. While reasonable efforts have been made in the preparation of this document to assure its accuracy, AAEON, assumes no liabilities resulting from errors or omissions in this document, or from the use of the information contained herein.

AAEON reserves the right to make changes in the product design without notice to its users.

Acknowledgments

Intel and Pentium are registered trademarks of Intel® Corporation.

IBM, PC/AT, PS/2 are trademarks of International Business Machines Corporation.

Microsoft Windows is a registered trademark of Microsoft Corporation.

RTL is a trademark of Realtek Semi-Conductor Co., Ltd.

Winbond is a trademark of Winbond Electronic Corporation.

AD is a trademark of Analog Device, Inc.

Geode is a trademark of National System Technology, Inc.

All other product names or trademarks are properties of their respective owners.

Packing List

Before installing your Panel PC, please check if the package contains the following items.

- AMB-2000HT(T)-E series Panel PC
- CD-ROM
 - Contains User's Manual, Drivers and Utilities
- Accessories
 - Water-proof sponge
 - Mounting brackets
 - Simple-equipped stand
 - Power cord (1.8M)
 - Anti-vibration HDD kit
 - Metal box top cover with sponge
 - Metal box bottom cover with sponge
 - HDD IDE cable
 - M3*6mm screws x 4
 - Silica gel x 4

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

Warning!



CompactFlash: Turn off power before inserting or removing CompactFlash storage card.

Safety & Warranty

1. Read these safety instructions carefully.
2. Keep this user's manual for later reference.
3. Disconnect this equipment from any AC outlet before cleaning. Do not use liquid or spray detergents for cleaning. Use a damp cloth.
4. For pluggable equipment, the power outlet must be installed near the equipment and must be easily accessible.
5. Keep this equipment away from humidity.
6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall could cause damage.
7. The openings on the enclosure are for air convection. Protect the equipment from overheating. **DO NOT COVER THE OPENINGS.**
8. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
10. All cautions and warnings on the equipment should be noted.
11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient over-voltage.
12. Never pour any liquid into an opening. This could cause fire or electrical shock.
13. Never open the equipment. For safety reasons, only qualified service personnel should open the equipment.

14. If any of the following situations arises, get the equipment checked by service personnel:
 - a. The power cord or plug is damaged.
 - b. Liquid has penetrated into the equipment.
 - c. The equipment has been exposed to moisture.
 - d. The equipment does not work well, or you cannot get it to work according to the users manual.
 - e. The equipment has been dropped and damaged.
 - f. The equipment has obvious signs of breakage.
15. DO NOT LEAVE THIS EQUIPMENT IN AN UNCONTROLLED ENVIRONMENT WHERE THE STORAGE TEMPERATURE IS BELOW -20° C (-4° F) OR ABOVE 60° C (140° F). IT MAY DAMAGE THE EQUIPMENT.

Contents

Copyright Notice.....	2
Acknowledgments.....	3
Packing List.....	4
Safety & Warranty.....	5
General Information.....	9
Introductions	10
Features:.....	11
Specifications:.....	12
Dimensions	15
Panel Mounting	16
Waterproof Sponge Position	17
Simple-equipped Stand Installation.....	19
Hardware Installation.....	20
Installing 2.5” HDD	21
How to connect Adjustment Panel.....	25
Jumper Settings	26
Safety precautions	27
CPU Card MBC-5410- Jumper Setting	28
BIOS Installation.....	38
System test and initialization	39
Award BIOS setup.....	40
Standard CMOS Features.....	42
BIOS Features Setup	43
Chipset Features Setup	44

Power management setup.....	45
Load BIOS Defaults.....	47
Load Setup Defaults.....	47
Integrated Peripherals	48
Set Supervisor Password.....	49
IDE HDD Auto Detection.....	50
Save & Exit setup.....	51
Exit without saving	51
Drivers Installation.....	52

Chapter

1

**General
Information**

Introductions

The AMB-2000HT(T)-E series fan less modular system panel PC, are PC-based industrial computers that are designed to serve as a Human Machine Interface. They are full-function PC-based systems with a 10.4" VGA (640 x 480) color TFT hi-brightness, long-life time LCD displays and works with different control modules via a 50-pin cable. The compact dimensions are ideal for automation applications when the installation space is critical or application environmental is fan less requirement. These PCs are characterized by their space saving, fan less solution, flexible selection of control boxes. AMB-2000HT(T)-E series have a heavy-duty steel chassis with optional aluminum front panel, which meets the toughest industrial and environmental standards.

Features:

- 10.4" VGA (640 x 480) color TFT LCD display
- Heavy-duty steel chassis and IP-65 certified aluminum front panel
- Fanless solution: All-in-one SBC with onboard NS Geode GX1 300MHz CPU (BGA)
- Three 16C550 (RS-232C) ports, one 16C550 (RS-232C) port can be set as RS-422/RS-485 also
- DiskOnChip – 2000 flash disk socket
- 16-bit stereo digital audio
- Anti-Vibration 2.5" Hard Disk bay
- Support Compact Flash Type II slot
- VESA75/100mm standard screw holes
- Rotatable mounting mechanism (optional)
- Resistive touchscreen (optional)

Specifications:

- **Construction:** Heavy-duty steel chassis and aluminum alloy front panel
- **Display:** 10.4" VGA (640 x 480) color TFT LCD
- **CPU:** Onboard NS Geode 300MHz
- **Memory:** Supports up to 256MB (Only 1 Slot)
- **Network (LAN):** 10/100 Base-TX Ethernet port
- **I/O ports:**
 - 3 external serial ports, 1 Internal serial Header (COM2 can choose RS-232/RS-422/RS-485, COM4 is reserved for touchscreen)
 - 1 parallel port (supports EPP/ ECP)
 - 1 PS/2 keyboard and mouse interface
 - Mic in/ Line in/ Line out
- **Disk Drive Housing:** 2.5" HDD
- **USB connector:** 2 USB ports
- **Mounting:** Panel Mount, Rear mount
 - Optional: Standard mount frame, Handle mount, Swivel ARM, Wall mount kit
- **Expansion slots:** One Type II CompactFlash™
- **Power supply:** Universal 70W switching power supply
- **OS support:** MS DOS, Windows 98/SE, Windows NT4.0, Windows CE.NET (optional)
- **Dimension (W x H x D):** 326 x 251 x 109.7mm (12.8" x 10" x 4.3")
- **Carton Dimension (W x H x D):** 460 x 380 x 301mm (18" x 14.9" x 11.8")
- **Gross Weight:** 6.5Kg (14.3lbs) with bezel

LCD Specifications

Display type	10.4" color TFT LCD
Max. Resolution	640 x 480
Max. Colors	256K
Dot size (mm)	0.33 x 0.33
Luminance (cd/m²)	250 (TYP.)
Viewing angle	80 (H)
	45 (V)
Operating temperature	0° ~ 45 (32~113)

Note: All AAEON's LCD products are manufactured with High precision technology. However, in all LCD panels there maybe a small number of defective pixels that do not change color. This is a normal occurrence for all LCD displays from all manufacturers and should not be noticeable or objectionable under normal operation. AAEON qualify the LCD panel following industry standard: Total 7 dead pixels on a screen or if there are 3 within 1 inch square area of each other on the display.

Power Supply

- **Input Voltage:** 85 ~ 270V AC
24V DC Input 70W (optional)
- **Input Voltage:** 10 ~ 30V DC

Environmental Specification

- **Operating temperature:** 0 to 45 (30 ~ 113)
- **Storage temperature:** -20 to 60 (-4 ~ 149)
- **Storage humidity:** 10 to 95%@ 40 , non-condensing
- **Vibration:** 1G/ 5 ~ 500Hz/ operation
- **Shock:** 15G peak acceleration (11 msec. Duration)
- **EMC:** CE/ FCC Class A

Touchscreen (optional)

Type: 8-wire, analog resistive

Resolution: 1024 x 1024

Light transmission: 76%± 2%

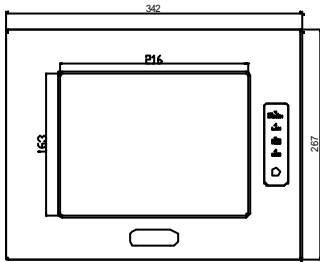
Lifetime: 1 million activations

Controller: RS-232

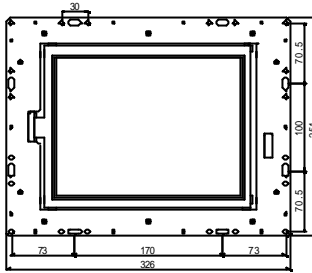
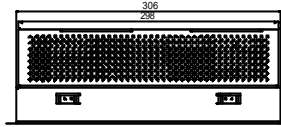
Dimensions

AMB-2000-E

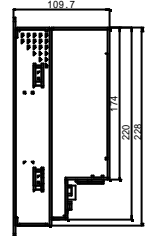
Unit: mm



Front Bezel Size



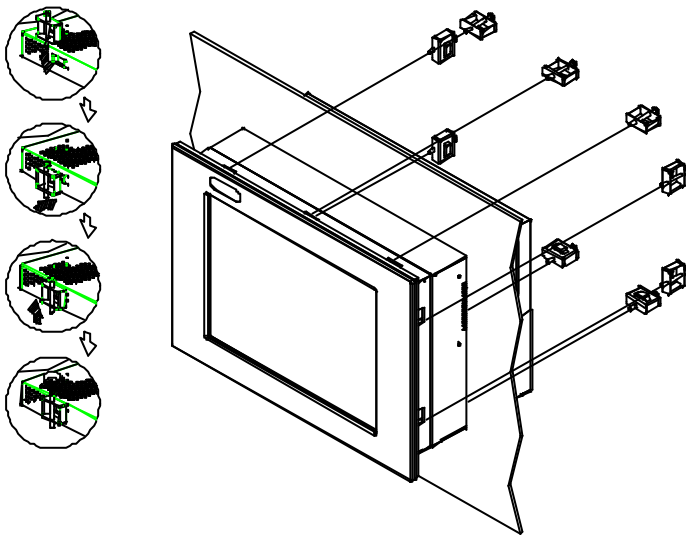
Chassis Cutout size : 309 x 231 mm
 LCD Cutout size : 216 x 163 mm



Panel Mounting

These display panels can be placed on a shelf or table, or mounted onto the wall. To mount them onto the wall, you need the mounting brackets, which you will find in the accessory box. Follow the steps described below:

1. Slide the display panel onto the wall
2. Tighten the brackets until the display panel is firmly secured to the wall.

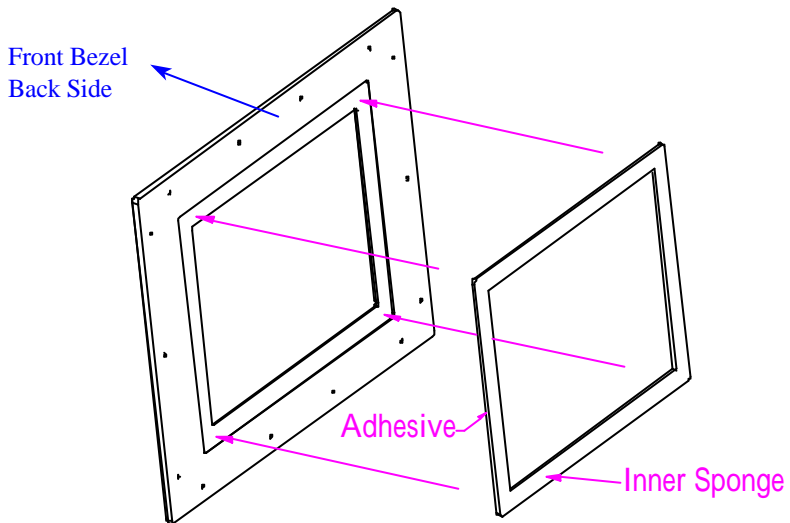


**The above picture is ONLY to illustrate the Panel mounting and may not contain the right product.

Waterproof Sponge Position

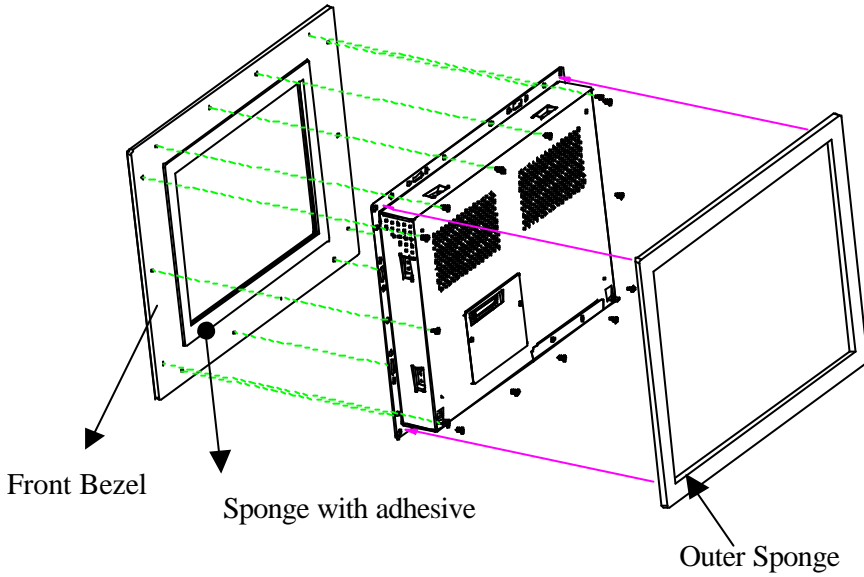
Inner sponge (the smaller one):

- a. Tear off the protection paper on the self-adhesive side of the inside sponge.
- b. Stick the sponge on the recessed area of the Aluminum bezel or customer's own bezel.



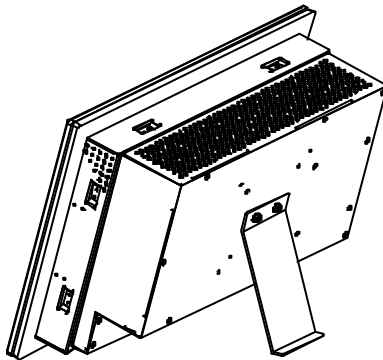
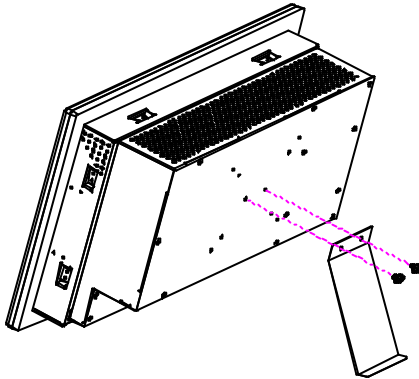
Outer sponge :

Press to close the outer sponge to the edge of the Panel PC.



Simple-equipped Stand Installation

Simple-equipped stand is the bracket below which is provided to fix in the back of the display with screws.



Chapter

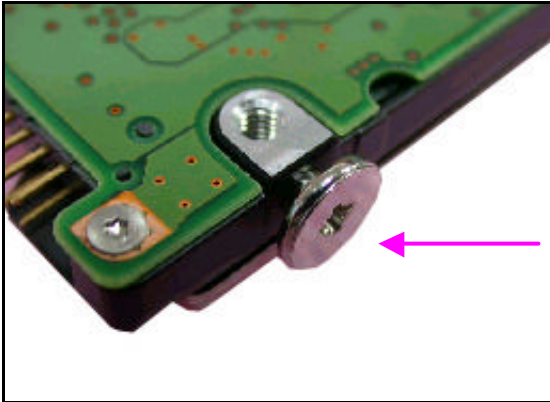
2

**Hardware
Installation**

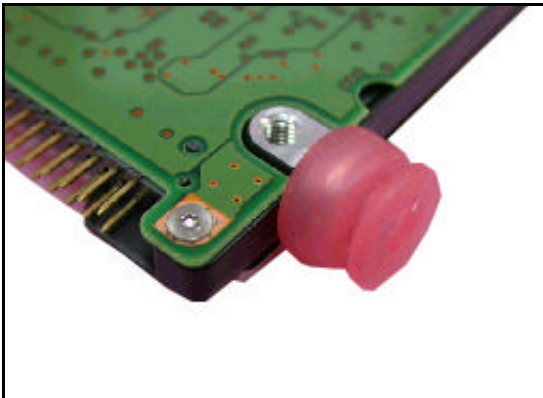
The panel PC is a PC-based industrial computer that is housed in aluminum alloy front panel and heavy-duty steel chassis. You can install 2.5" HDD easily by removing the side cover of HDD drive bay.

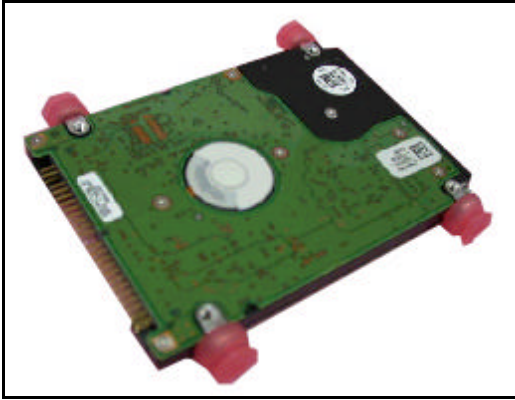
Installing 2.5" HDD

1. Screw the 2.5" HDD on four screws.



2. Cover the four screws with silica gel as diagram.

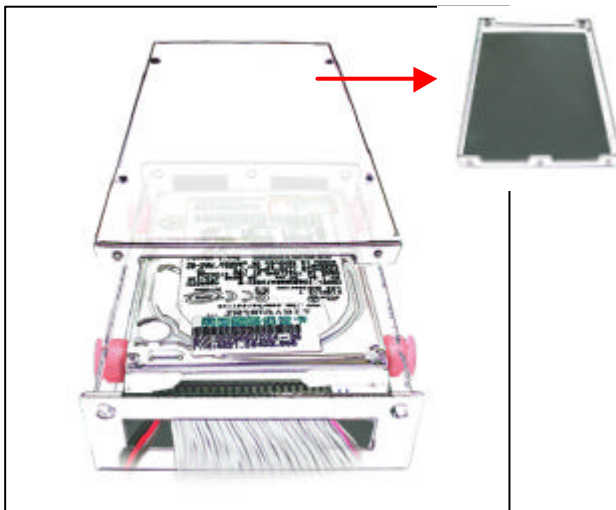
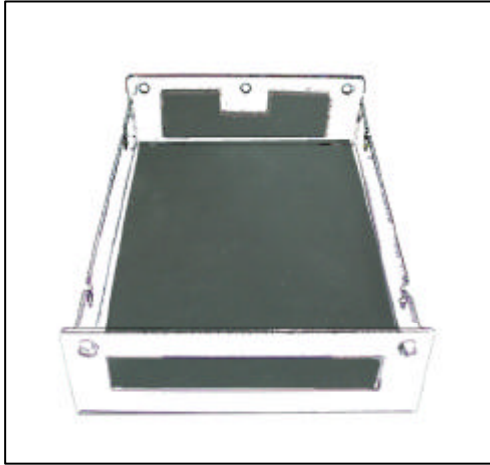




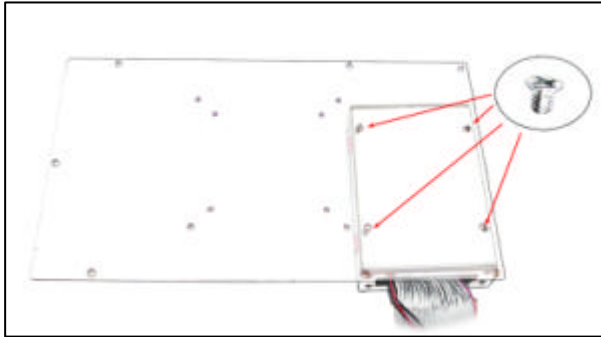
3. Connect the IDE ribbon cable. Make sure the pink line of female connector align and connect to pin# 1 of hard disk.



4. Install the hard disk into the drive bay and screw the drive bay cover, which is with sponge.



5. Install the drive bay into the machine rear cover by four screws.
Screw the rear cover into the machine.



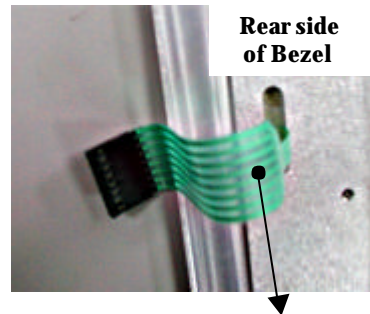
How to connect Adjustment Panel

Step 1:

Take off Adjustment Panel (abbreviation: AP) from accessory box

Step 2:

Put the AP cable through hole on customized bezel, and then stick AP on the bezel.



Step 3:

Connect the AP cable (cable A) with the cable on LCD side (cable B)



Please note:

The white spot on AP cable (cable A) must connect to the arrow embossment on cable B



Chapter

3

**Jumper
Settings**

Safety precautions

Warning!

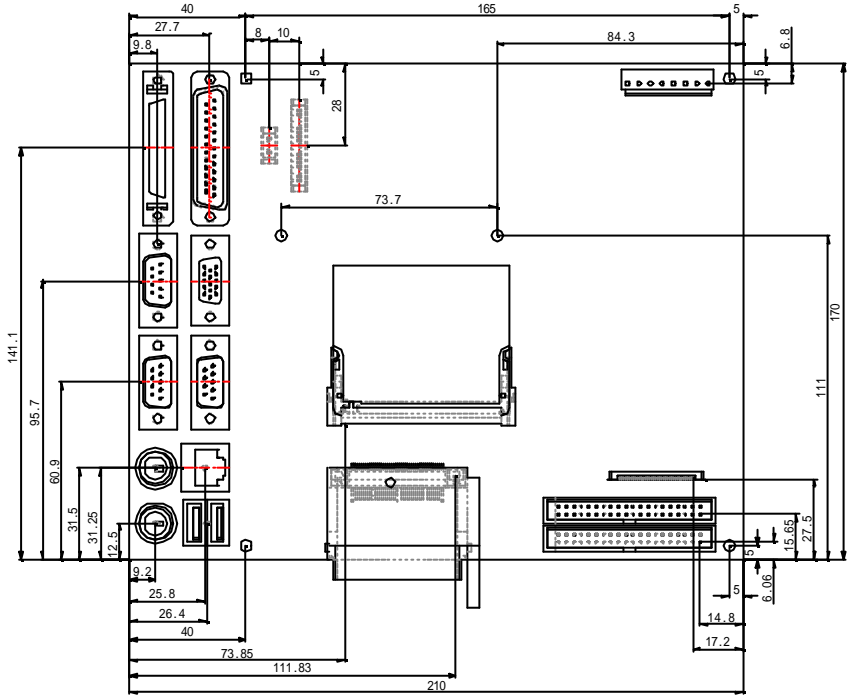
Always completely disconnect the power cord from your chassis whenever you are working on it. Do not make connections while the power is on because sensitive electronic components can be damaged by the sudden rush of power. Only experienced electronics personnel should open the PC chassis.

Caution!

Always ground yourself to remove any static charge before touching the CPU card. 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.

CPU Card MBC-5410- Jumper Setting

Board Dimensions



Jumper Settings

Jumpers allow users to manually customize system configurations to their suitable application needs.

JP1: M-System Register Select

M-System	JP1	Default
D000H-D1FFH	1-2	
D800H-D9FFH	2-3	

JP2: Clear CMOS Selecting

CMOS	JP2	Default
Normal	1-2	
Clear CMOS	2-3	

JP4&5: RS-232/ RS-422/ RS-485

	RS-232 *	RS-422	RS-485
JP4	1-2	3-4	5-6
JP5	1-2	2-3	2-3
	4-5	5-6	5-6
	7-8	8-9	8-9
	10-11	11-12	11-12

* Default setting

JP6: Panel Voltage Select

Panel Voltage	JP6	Default
VCC	1-2	
VCC3	2-3	

Connector Pin Assignment

VGA1: VGA DB15 Connector					
PIN	NAME	PIN	NAME	PIN	NAME
1	R	6	GND	11	N/A
2	G	7	GND	12	DDCDATA
3	B	8	GND	13	HSYNC
4	N/A	9	N/A	14	VSYNC
5	GND	10	GND	15	DDCCLK

CF1: Support Compact Flash Connector			
PIN	NAME	PIN	NAME
1	GND	26	GND
2	CFD3	27	CFD11
3	CFD4	28	CFD12
4	CFD5	29	CFD13
5	CFD6	30	CFD14
6	CFD7	31	CFD15
7	CFCS-0	32	CFCS-1
8	GND	33	GND
9	GND	34	CFIOR-
10	GND	35	CFIOW-
11	GND	36	VCC
12	GND	37	CFIRQ-
13	VCC	38	VCC
14	GND	39	CF02
15	GND	40	N/A
16	GND	41	CFRST-
17	GND	42	CFDIORDY
18	CFA2	43	N/A
19	CFA1	44	VCC
20	CFA0	45	CFLED
21	CFD0	46	CF03
22	CFD1	47	CFD8
23	CFD2	48	CFD9
24	CF01	49	CFD10
25	GND	50	GND

Power 1: Power Connector			
PIN	NAME	PIN	NAME
1	VCC	2	VCC
3	VCC	4	GND
5	GND	6	GND
7	+12V	8	-12V

J2: Internal VGA Signal Connector			
PIN	NAME	PIN	NAME
1	RED	2	DDCDATA
3	GREEN	4	DDCLK
5	BLUE	6	GND

Panel2: Support Panel Connector			
PIN	NAME	PIN	NAME
1	DE	2	VSYNC
3	HSYNC	4	GND
5	CLK	6	GND
7	FPD0	8	FPD1
9	FPD2	10	FPD3
11	FPD4	12	FPD5
13	GND	14	FPD6
15	FPD7	16	FPD8
17	FPD9	18	FPD10
19	FPD11	20	GND
21	FPD12	22	FPD13
23	FPD14	24	FPD15
25	FPD16	26	FPD17
27	GND	28	ENVDD
29	POWER	30	POWER
31	+12V	32	GND
33	+12V	34	GND
35	SOUTH	36	SIND
37	VCC	38	
39	KBCLK	40	KBDATA

Panel3: Support Sound Connector			
PIN	NAME	PIN	NAME
1	VCC	2	GND
3	VCC	4	MCLK
5	MDATA	6	LINE-OUT-R
7	WAKE UP	8	LINE-OUT-L
9	N/A	10	GND

R136: Compact Flash ID Select	
Slave	Open
Master	Short

Keyboard 1: 6PIN MINIDIN			
PIN	NAME	PIN	NAME
1	K/B DATA	2	N/A
3	GND	4	POWER
5	K/B CLK	6	N/A

Mouse 1: 6PIN MINIDIN			
PIN	NAME	PIN	NAME
1	MOUSE DATA	2	N/A
3	GND	4	POWER
5	MOUSE CLK	6	N/A

CN1 & CN2: 4PIN POWER CONNECTOR			
PIN	NAME	PIN	NAME
1	VCC	2	GND
3	GND	4	+12V

CN3: 4PIN MIDIDIN			
PIN	NAME	PIN	NAME
1	+12V	2	+12V
3	GND	4	GND

CN4: EXT SOUND HEADER			
PIN	NAME	PIN	NAME
1	LINE-OUT-R	2	LINE-OUT-L
3	GND	4	GND
5	LINE-IN-R	6	LINE-IN-L
7	GND	8	GND
9	MIC	10	N/A

CN5: CD-IN CONNECTOR			
PIN	NAME	PIN	NAME
1	CD-R	2	CD-REF
3	CD-REF	4	CD-L

FAN1/ FAN2/ FAN3: FAN POWER CONNECTOR			
PIN	NAME	PIN	NAME
1	GND	2	+12V
3	N/A		

COM1/ COM2/ COM3/ COM4: COMPORT BOX HEADER			
PIN	NAME	PIN	NAME
1	DCD	2	SIN
3	SOUT	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI	10	N/A

PCI1: SUPPORT MINI-PCI CONNECTOR					
PIN	NAME	PIN	NAME	PIN	NAME
1	N/A	43	N/A	85	AD8
2	N/A	44	AD26	86	C\BE-0
3	N/A	45	C\BE-3	87	AD7
4	N/A	46	AD24	88	VCC3
5	N/A	47	AD23	89	VCC3
6	N/A	48	IDSEL	90	AD6
7	N/A	49	GND	91	AD5
8	N/A	50	GND	92	AD4
9	N/A	51	AD21	93	N/A
10	N/A	52	AD22	94	AD2
11	N/A	53	AD19	95	AD3
12	N/A	54	AD20	96	AD0
13	N/A	55	GND	97	VCC
14	N/A	56	PAR	98	N/A
15	N/A	57	AD17	99	AD1
16	N/A	58	AD18	100	N/A
17	INT-C	59	C\BE-2	101	GND
18	VCC	60	AD16	102	GND
19	VCC3	61	IRDY-	103	N/A
20	INT-B	62	GND	104	N/A
21	N/A	63	VCC3	105	N/A
22	N/A	64	FRAME-	106	N/A
23	GND	65	CLKRUN	107	N/A
24	VCC3	66	TRDY-	108	N/A
25	CLK	67	SERR-	109	N/A
26	PCIRST-	68	STOP-	110	N/A
27	GND	69	GND	111	N/A
28	VCC3	70	VCC3	112	N/A
29	REQ-2	71	PERR-	113	N/A
30	GNT-2	72	DEVSEL-	114	GND
31	VCC3	73	C\BE-1	115	N/A
32	GND	74	GND	116	N/A
33	AD31	75	AD14	117	N/A
34	PME-	76	AD15	118	N/A

35	AD29	77	GND	119	N/A
36	N/A	78	AD13	120	N/A
37	GND	79	AD12	121	N/A
38	AD30	80	AD11	122	N/A
39	AD27	81	AD10	123	VCC
40	VCC3	82	GND	124	VCC3
41	AD25	83	GND		
42	AD28	84	AD9		

LPT: PRINT EXT CONNECTOR			
PIN	NAME	PIN	NAME
1	STB-	14	AFD-
2	PPD0	15	ERRO-
3	PPD	16	INIT-
4	PPD	17	SLIN-
5	PPD	18	GND
6	PPD	19	GND
7	PPD	20	GND
8	PPD	21	GND
9	PPD	22	GND
10	ACK-	23	GND
11	BUSY	24	GND
12	PE	25	GND
13	SLCT	26	N/A

USB1: USB EXT CONNECTOR			
PIN	NAME	PIN	NAME
1	USBOC	5	USBOC
2	USB1-	6	USB2-
3	USB1+	7	USB2+
4	GND	8	GND

IDE1: HDD BOX HEADER

PIN	NAME	PIN	NAME	PIN	NAME
1	RESET	15	HD1	29	ACK-
2	GND	16	HD14	30	GND
3	HD7	17	HD0	31	IRQ14
4	HD8	18	HD15	32	N/A
5	HD6	19	GND	33	HA0
6	HD9	20	N/A	34	N/A
7	HD5	21	HDRQ	35	HA1
8	HD10	22	GND	36	HA2
9	HD4	23	IOW-	37	CS1-
10	HD11	24	GND	38	CS3-
11	HD3	25	IOR-	39	LED
12	HD12	26	GND	40	GND
13	HD2	27	IORDY		
14	HD13	28	GND		

IDE2: HDD BOX HEADER

PIN	NAME	PIN	NAME	PIN	NAME
1	RESET	15	HD1	29	ACK-
2	GND	16	HD14	30	GND
3	HD7	17	HD0	31	IRQ15
4	HD8	18	HD15	32	N/A
5	HD6	19	GND	33	HA0
6	HD9	20	N/A	34	N/A
7	HD5	21	HDRQ	35	HA1
8	HD10	22	GND	36	HA2
9	HD4	23	IOW-	37	CS1-
10	HD11	24	GND	38	CS3-
11	HD3	25	IOR-	39	LED
12	HD12	26	GND	40	GND
13	HD2	27	IORDY		
14	HD13	28	GND		

FDC1: FDD CONNECTOR			
PIN	NAME	PIN	NAME
1	POWER	2	INDEX
3	POWER	4	DRVA
5	POWER	6	DSKCHG
7	N/A	8	N/A
9	N/A	10	MOTEA
11	N/A	12	DIR
13	N/A	14	STEP
15	GND	16	WDATA
17	N/A	18	WGATE
19	GND	20	TK00
21	GND	22	WPT
23	GND	24	RDATA
25	GND	26	HEAD

IR1: IR HEADER			
PIN	NAME	PIN	NAME
1	POWER	2	FIRRX
3	IRRX	4	GND
5	IRTX	6	CIRRX

CN6: RJ-45			
PIN	NAME	PIN	NAME
1	TX+	2	TX-
3	RX+	4	GND
5	RX-	6	GND
7	GND	8	GND

Chapter

4

**BIOS
Installation**

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 MBC-5410 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.

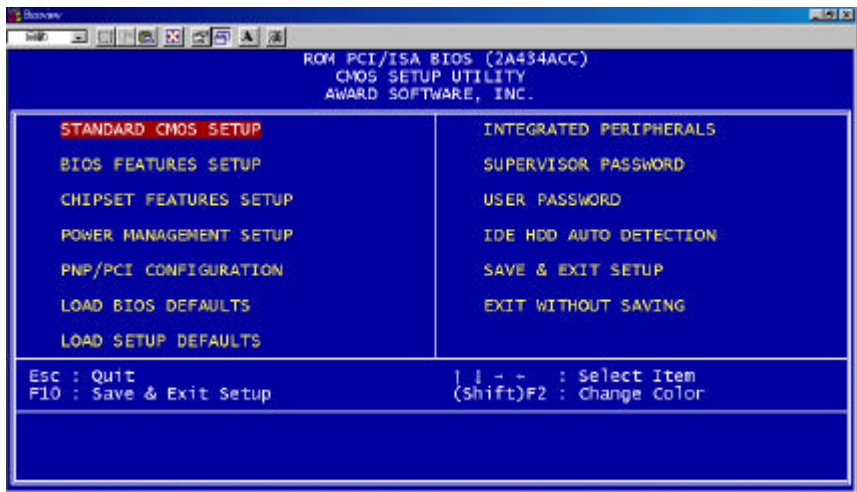
Note: Because of chipset limitation, the AMB-2000HT(T)-E series do NOT support USB CD-ROM booting function.

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.)

BIOS Features Setup

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

Chipset Features Setup

Use this menu to change the values in the chipset registers and

optimize your system's performance.

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 Configuration

This entry appears if your system supports PnP/PCI.

Load BIOS Defaults

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

Load Setup 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.

Integrated Peripherals

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

Set Supervisor/User Password

Use this menu to set User and Supervisor Passwords.

IDE HDD Auto Detection

Automatically detect and configure IDE hard disk parameters.

Save and Exit Setup

Save CMOS value changes to CMOS and exit setup.

Exit Without Saving

Abandon all CMOS value changes and exit setup.

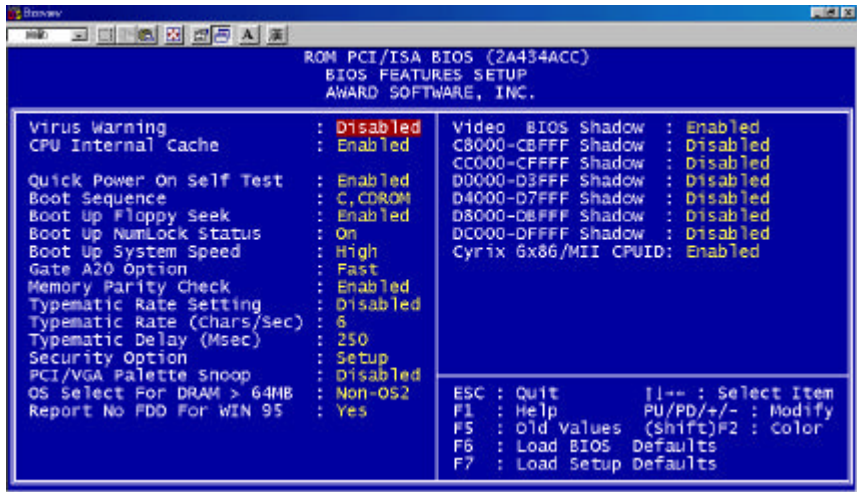
Standard CMOS Features

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.



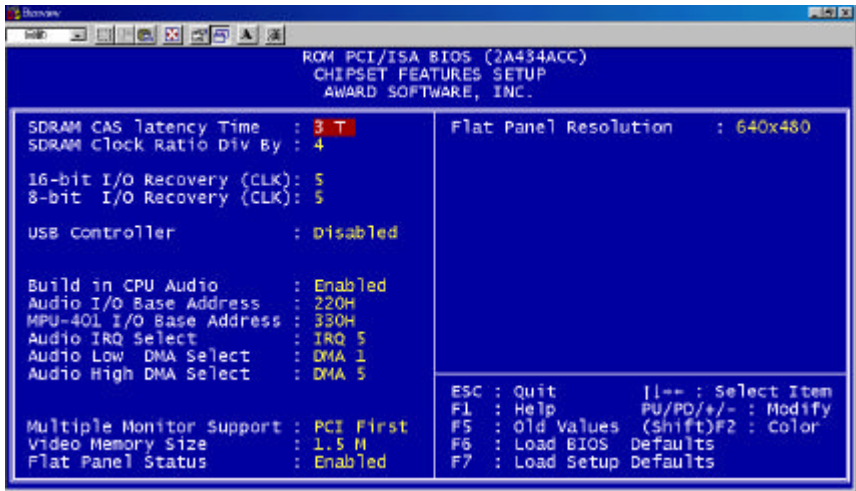
BIOS Features Setup

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 MBC-5410.



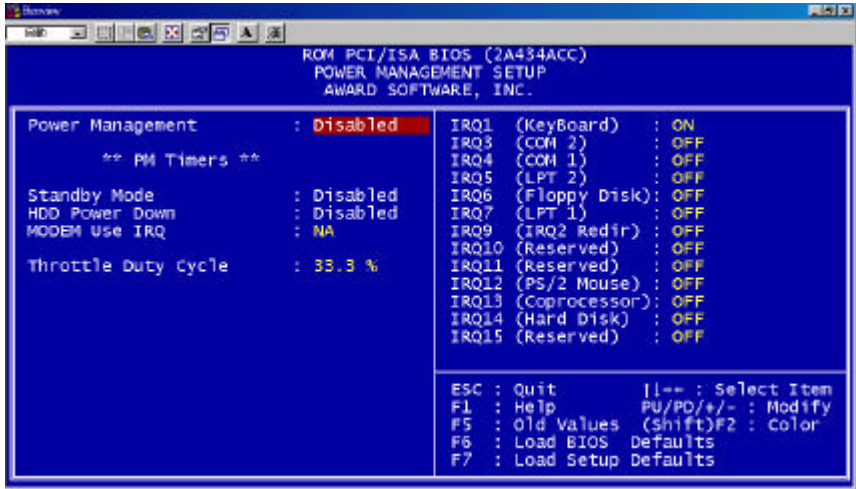
Chipset Features Setup

By choosing the Chipset Features Setup option from the INITIAL SETUP SCREEN menu, the screen below is displayed. This sample screen contains the manufacturer's default values for the MBC-5410.



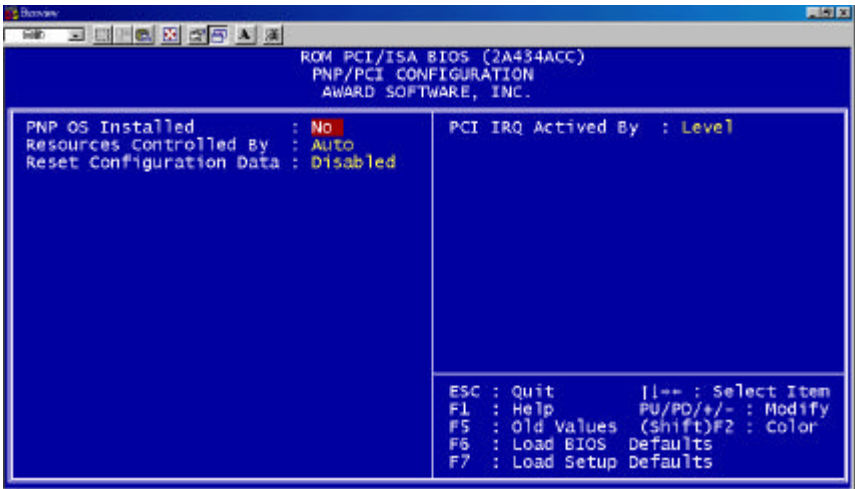
Power management setup

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 MBC-5410.



PnP/PCI Configurations

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 MBC-5410.



Load BIOS Defaults

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

Load BIOS Defaults (Y/N)?

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

Load Setup Defaults

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

Load Setup Defaults (Y/N)?

Pressing "Y" loads the default values that are factory settings for optimal performance system operations

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 MBC-5410.



Set Supervisor 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:

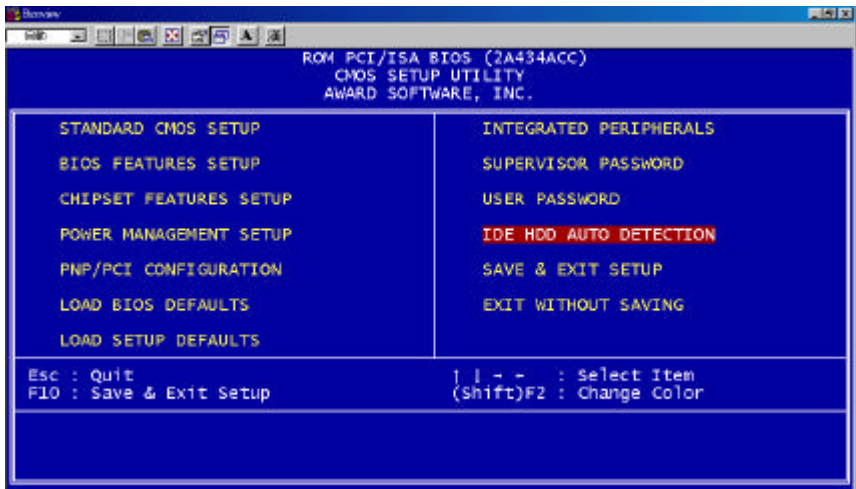
System Enter a password each time the system boots and whenever you enter Setup.

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.

IDE HDD Auto Detection

The IDE HDD AUTO DETECTION utility can automatically detect the IDE hard disk installed in your system. You can use it to self-detect and/or correct the hard disk type configuration. You need to repeat the setup for each of the IDE combinations:



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.

Exit without saving

Selecting this option and pressing <Enter> lets you exit the Setup program without recording any new values or changing old ones.

Chapter

5

**Drivers
Installation**

The AMB-2000HT(T)-E comes with a CD, which contains most of drivers and utilities of your needs.

There are several ways of installation depending on the driver package under different Operating System application.

We recommend that the system driver installation procedure must be performed first.

If you utilize Windows NT series OS, you are strongly recommended to download the latest version Windows NT Service Pack from Microsoft website and install it before installing any driver.

Note: Please utilize the CD Diskette to install Windows 98. Don't install it by copying those program files to Hard Disk.

5.1 Installation 1:

Applicable for Windows 9x

1. Insert the AMB-2000HT(T)-E CD Diskette into the CD ROM Drive.
2. Find the exe file of Windows 9x driver from:

"cd-rom" \ Driver \ System \ **AMB-2000HT(T)-E** \ Cyrix Media
GX

"cd-rom" : the drive letter of your CD-ROM drive

Please follow the onscreen instructions to install the driver in sequence to finish VGA, IDE, and Audio drivers.

(Notice: After finished IDE drivers installing, press F8 to enter Windows 98 in Safe Mode then restart the system once again to real finish IDE drivers installation. This is caused by original manufactures drivers.)

3. From **Start**, select the **Settings group**, and then click on the **Control Panel** icon. In the **Control Panel**, select the desired device and click on the icon. Follow the step-by-step instruction and click on **OK** button.

4. Click on the **Finish** button to finish installation process. And allows the system to reboot.
(Notice: After finished touchscreen installing, calibrate the touchscreen controller.)

Installation 2:

Applicable for Windows 9x

1. Insert the **AMB-2000HT(T)-E CD Diskette** into the CD ROM Drive.
2. Click on **Start** button, select the **Settings**, and then click on the **Control Panel** icon.
3. Double click on the **Add/Remove Hardware** icon and **Add New Hardware Wizard** will appear. Click on the **Next** button.
4. Select **Search for the best driver for your device (Recommended)** and click on the **Next** button.
5. Select **Specify a location**, click on **Have Disk** button then key in the CD-ROM path and specify component drivers and OS folders. Then click on the **Next** button.
6. The Wizard shows that Windows driver file search for the device: (For example, Ethernet devices, the list appear **Realtek RTL8100 Family PCI Fast Ethernet NIC Intel® 82559 Fast Ethernet LAN**). Click on the **Next** button.
7. The system will ask you to insert Windows 98 CD Diskette. Click on the **OK** button to insert Diskette and key in path.
8. Click on the **OK** button.
9. Click on the **Finish** button to finish installation process. And allows the system to reboot.

Installation 3:

Applicable for Windows NT 4.0

1. Insert the **AMB-2000HT (T)-E CD Diskette** into the CD ROM Drive.
2. Start system with Windows NT 4.0 installed.
IMPORTANT: When the "Please select the operating system to start..." message is displayed, select "Windows NT Workstation Version 4.00 [VGA mode]".
3. From **Start**, select the **Settings group**, and then click on the **Control Panel** icon.
4. In the **Control Panel**, select the desired device and click on the icon.
5. Follow the step-by-step instruction and click on **OK** button.
6. Click on the **Have Disk...** button.
7. Key in CD-ROM path and specify component drivers, then click on the **OK** button.
8. From the list of displayed devices, select your desired device.
9. If a message appears stating the driver is already installed on the system, and asks if you want to use the current or new drivers, be sure to select the **New** button.
10. If prompted for the driver diskette a second time, click on the **Continue** button.
(Notice: In some cases the system will ask you to insert Windows NT CD Diskette. Follow its instructions to complete the setup procedures.)
11. When the message **The drivers were successfully installed** is displayed, remove the display driver diskette, then click on the **OK** button.
12. Reboot the system.

Touchscreen Driver Installation

For Touchscreen installation please refer to the excel file :

ReadMe_All-Prods-Touch-list.xls to find out your match touscreen type and follow the installation guide in respective folders.

For AMB-2000HTT-E1 & AMB-2000HTT-E2, please use the **Combo Toolkit** to install.