

AOP-8150

Intel® ULV Celeron® 650MHz Processor
Fanless Operator Panel
with 15" TFT LCD

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Packing List

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

- 1 AOP-8150 series Fanless Operator Panel PC
- 10 Mounting Bracket & Screws
- 1 Power cord (optional)
- 1 Transfer board for CD-ROM (optional)
- 1 CD-ROM for manual (in PDF format) and drivers

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

Warning



1. Use a 3 V @ 200 mA lithium battery
2. Packing: please carry the unit with both hands, handle with care
3. Maintenance: to properly maintain and clean the surfaces, use only approved products or clean with a dry applicator
4. Do not remove CompactFlash storage card while reading from or writing into the 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 plug-in 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 may 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 may cause fire or electrical shock.
13. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.

14. If one 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.
16. CAUTION: DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED.REPLACE ONLY WITH THE SAME OR EQUIVALENT TYPE RECOMMENDED BY THE MANUFACTURER, DISCARD USED BATTERIES ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.

DISCLAIMER: This set of instructions is given according to IEC 704-1. AAEON disclaims all responsibility for the accuracy of any statements contained herein.

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Chapter

1

**General
Information**

Introduction

The AOP-8150 panel PC is a Ultra Low Voltage Low power Celeron processor computer that is designed to serve as a human machine interface (HMI) and as a multimedia computer. It is a PC-based system with 15" color TFT LCD display, on-board Ethernet controller, multi-COM port interfaces and an audio controller. In addition, its "fit anywhere" design makes it very flexible and able to be used in many different kinds of installations. It can be wall mounted, panel mounted or stood upright on a desktop.

For system integrators, this simple, complete, compact and highly integrated multimedia system let you easily build a panel PC into your applications. Common industrial applications include factory automation systems, precision machinery, and production process control. It is also suitable for many non-industrial applications, including interactive kiosk systems, entertainment management, and car park automation. Our panel PC is a reliable, cost-effective solution to your application's processing requirements.

Features

- 15" XGA color TFT LCD display
- Touchscreen, Mini PCI and 6-in-1 card reader support
- Slim and Fanless solution: All-in-one SBC with Intel® ULV Celeron® 650MHz CPU onboard
- Windows® CE.NET 4.2 and Windows® XP Embedded support (optional)
- 10/100Base-T or Giga Ethernet (Optional)

Specification

System

- Display 15" XGA (1024 x 768) color TFT LCD
- CPU Board
 - Intel® ULV Celeron® 650MHz CPU
 - Support DDR Memory up to 1GB
- Memory
 - Onboard 256MB, support DDR
 - Memory up to 1GB
 - Mini PCI socket
- Disk Drive space Slim CD-ROM / Combo / DVD
2.5" HDD (Anti-vibration)
- Expansion
 - One 6-in-1 card reader
 - One Mini PCI slot
 - One PCI slot (Optional)
- I/O
 - Serial Port
 - 5 x RS-232, 1 x RS-232/422/485
 - 4 x USB 2.0 ports
 - 1 x parallel port
 - 1 x VGA port
 - 1 x PS/2 keyboard, 1 x PS/2 mouse
 - Audio
 - Mic In, Line in, Line out, S/P DIF Out
 - (for 5.1 channel audio)
 - Ethernet
 - One 10/100Base-T RJ-45 connector

RJ-45	One 10/100Base-T or One Giga connector (Optional)
	One DB-15 connector for digital IO (Support 4 in + 4 out)
<ul style="list-style-type: none"> • Front Panel • Other 	Resistive touchscreen
	Support Mini PCI Wireless LAN with Antenna (Optional)
	Support Mini PCI Capture card
(Optional)	
	One PCI expansion kit (Optional)
<ul style="list-style-type: none"> • Power Supply • OS support 	75W, AT, AC-in 100/240V
	Windows [®] 2000, Windows [®] XP, Linux Red Hat, Windows [®] CE.NET 4.2 & Windows [®] XP Embedded (Optional)

LCD

• Model	AOP-8150HT series
• Display Type	15" color TFT LCD
• Max. Resolution	1024 x 768
• Max. Colors	262,144
• Dot Size	0.297mm x 0.297mm
• Luminance	250 cd/m2
• Viewing Angle	150 ^o (H) 145 ^o (V)

- Back Light MTBF 30,000hrs

Touchscreen

- Type 8-wire, analog resistive
- Light Transmission 75%
- Resolution 2048 x 2048
- Interface RS-232 (COM 4)
- Lifetime 1 million activations

Mechanical

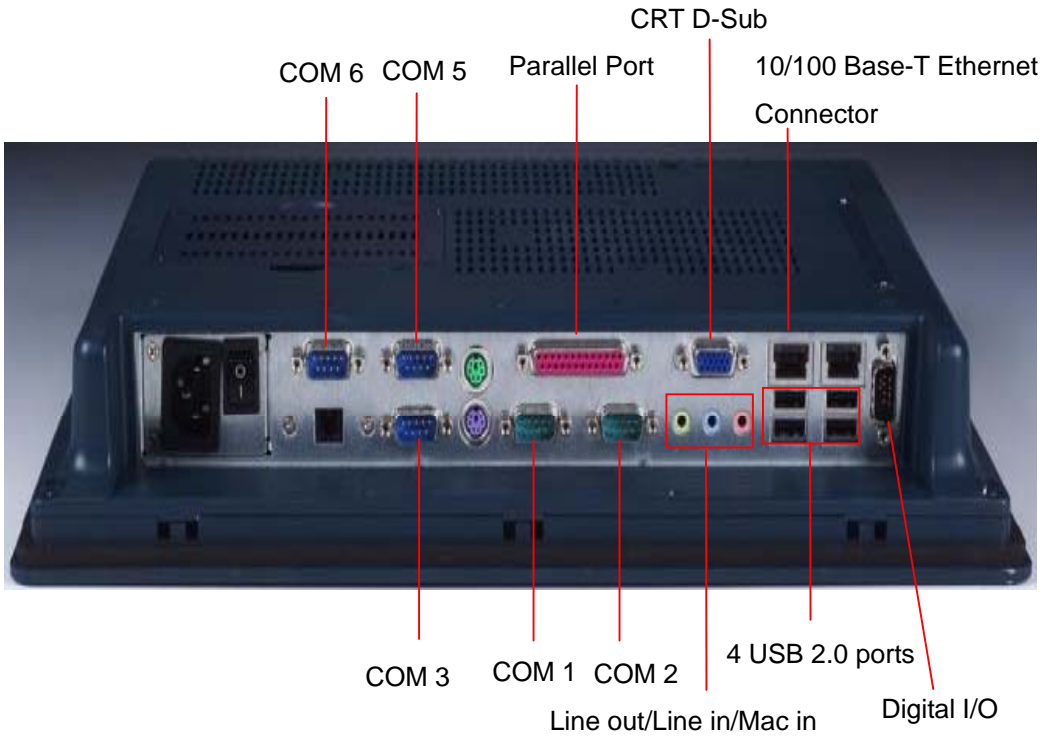
- Construction Plastic chassis (IP65 certified front panel)
- Front Panel Color PMS 2965C (Dark Blue)
- Mounting Panelmount, VESA 100mm, Desk Top
Stand (Optional)
- Dimension 16" (W) x 12.2" (H) x 2.6" (D)
(407mm x 310.5mm x 65mm)
- Cutout Size 394 x 297.5 mm
- Gross Weight 6 Kg

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.

Front Side

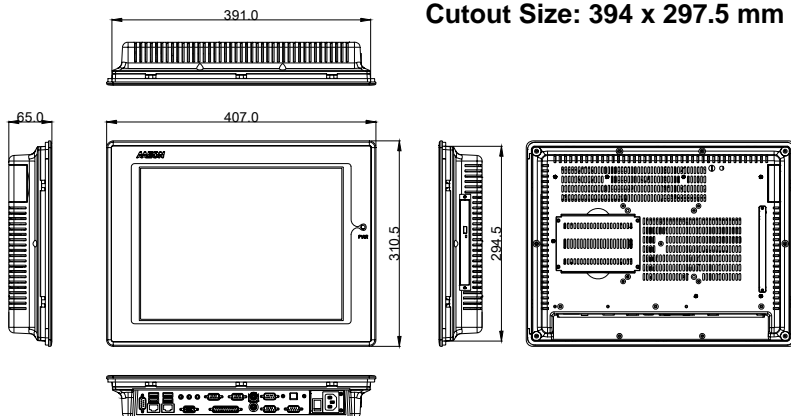


Rear Side

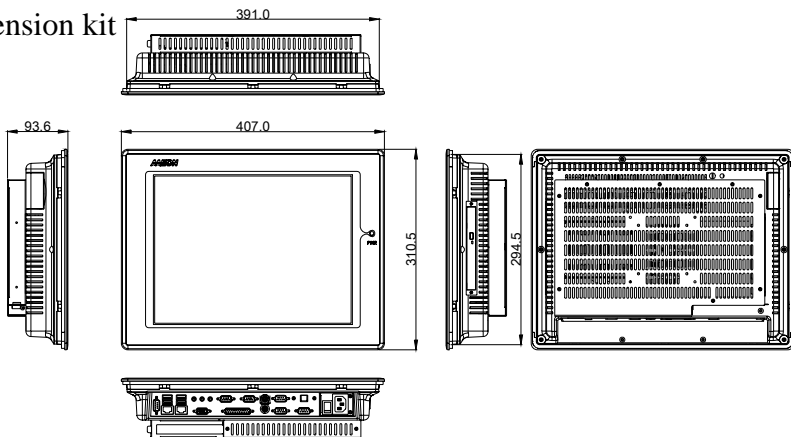


Dimension

Cutout Size: 394 x 297.5 mm



With PCI extension kit



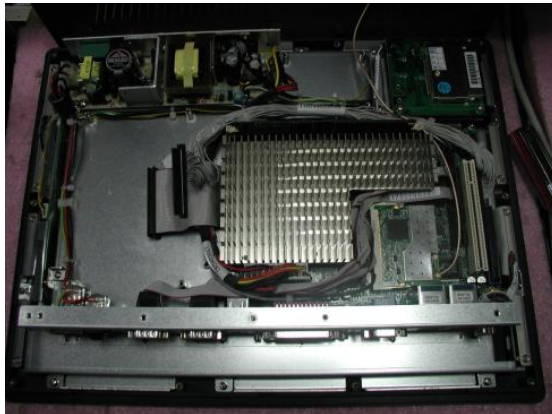
Chapter

2

**Hardware
Installation**

CD-ROM Installation

1. Disassemble the plastic cover of the monitor.



2. Lock the transfer board (the board is at accessory box)



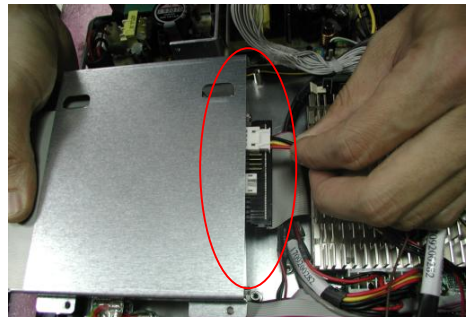
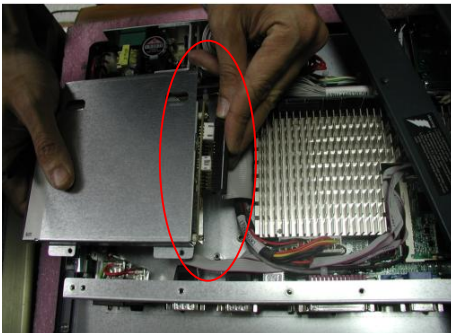
- Lock the CD-ROM with the bracket



3. Disassemble the CD-ROM cover



4. Insert IDE cable and Power cable into CD-ROM module



5. Fix the CD-ROM module in the AOP-8150



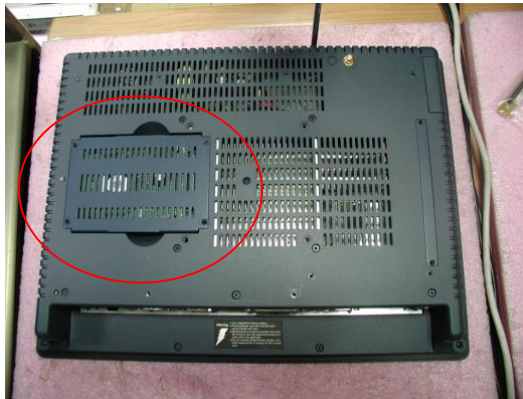
6. Lock the plastic cover of the monitor and complete the installation



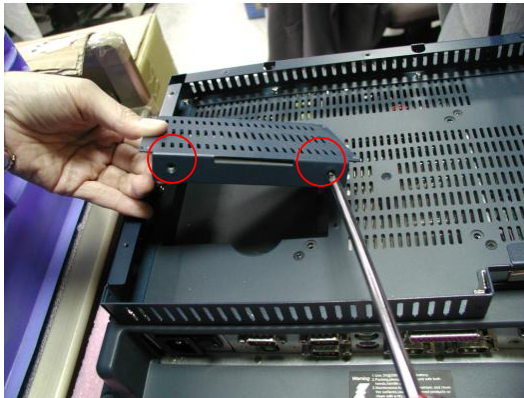
2.5" Hard Disk Drive Installation

We'll show you how to install the Hard Disk Drive into the Panel PC. When you prepare the following items at hand, you can start to your installation.

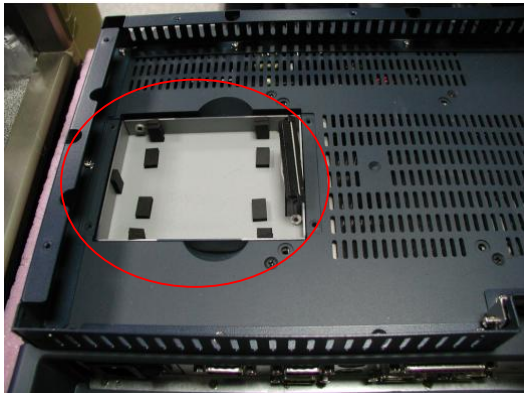
1. Disassemble HDD cover



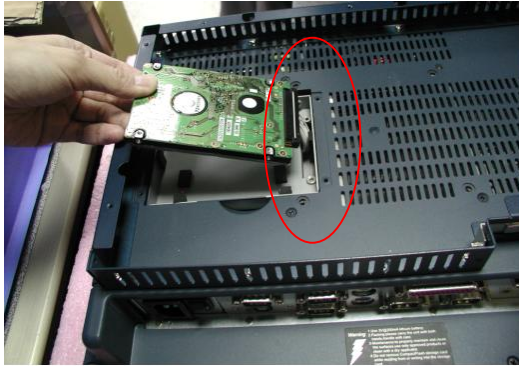
2. Disassemble HDD module



3. Put off the HDD upper cover



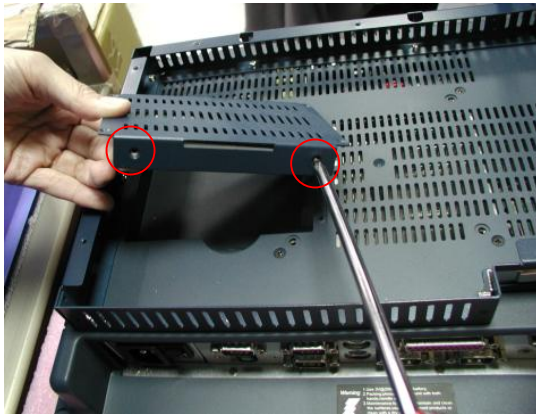
4. Insert IDE cable into HDD



5. Put HDD into the base



6. Fix the HDD cover with screws



7. Fix the cover with screws



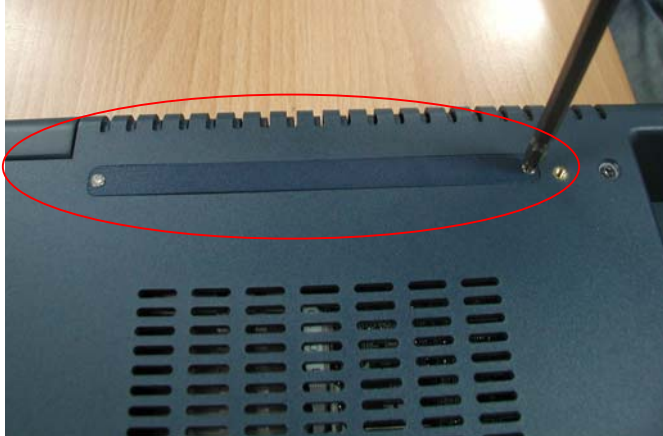
PCI extension kit Installation

PCI extension kit will be attached along with the package. Please see the following steps for details.

Step 1: Get the rack ready

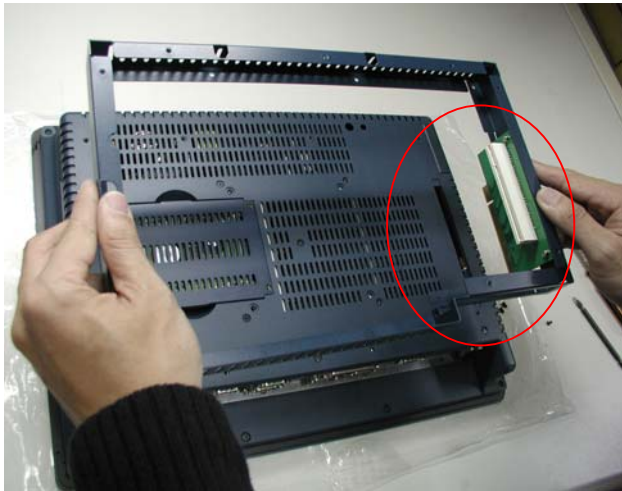


Step 2: Unlock the bar indicated.

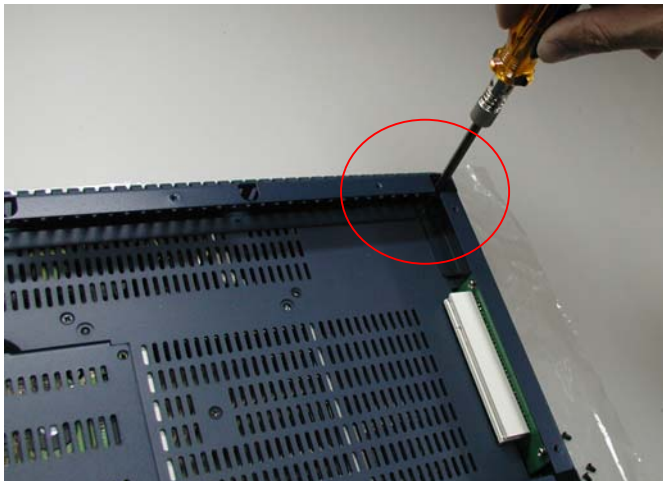


Step 3: Plug Riser card into the socket beneath the bar, and plug the rack on

the back of AOP-8150.



Step 4: Fix the rack with the screws on the corners.



Step 5: Plug your PCI card into the white slot indicated.



Step 6: You have finished PCI extension card installation.



Step 7: Put the cover over the back of AOP-8150.



Panelmount Installation

The display panel can be mounted into the wall. You will need the screws along with the mounting brackets, which be packed in the accessory box.

Follow the steps below:

Before you start to follow the instructions, please place the display panel into the wall. See the following illustration on the left.

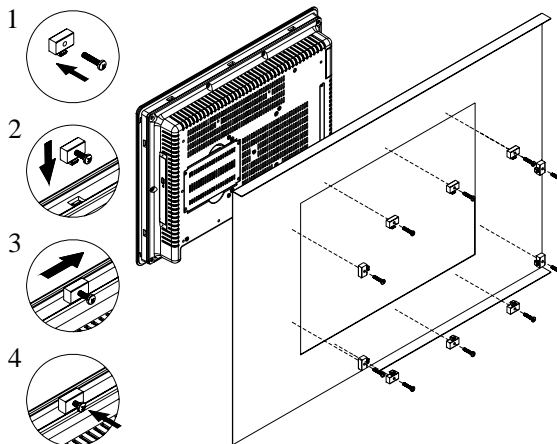
Step 1: Place the mounting brackets and plug the screw.

Step 2: Aim the mounting set at the hole on the monitor.

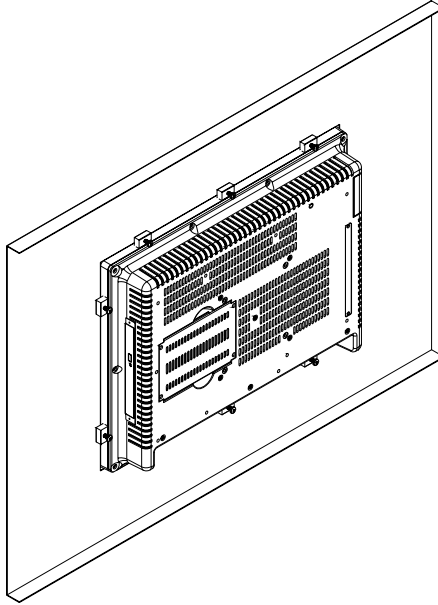
Step 3: Move the mounting set to the narrow gauge and fix it with screws.

Step 4: You've completed the preliminary when the mounting set is tightened.

Next, repeat the steps and tighten all mounting set around the monitor until the monitor is firmly mounting on the wall.



Complete Illustration



Digital I/O 8 bit Connector (CN9)

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

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

The pin definitions and registers mapping are illustrated below:

Address: 803H

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

Note:

4 IN/ 4 OUT, 8 IN, 8 OUT are chosen by BIOS.

AOP-8150 (D-SUB 15P Male)

Pin	Signal	Pin	Signal
1	DIN1	2	DIN2
3	DIN3	4	DIN4
6	DOUT1	7	DOUT2
8	DOUT3	9	DOUT4
11	+5V	12	GND

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

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

Chapter

3

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 AOP-8150 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.

Award BIOS Setup

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

Entering setup

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



Standard CMOS Features

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

Advanced BIOS Features

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

Advanced Chipset Features

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

Integrated Peripherals

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

Power Management Setup

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

PnP/PCI Configurations

This entry appears if your system supports PnP/PCI.

PC Health Status

This menu allows to you check PC status such as voltage, fan speed and temperature.

Frequency/Voltage Control

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

Load Fail-Safe Defaults

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

Load Optimized Defaults

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

Set Supervisor/User Password

Use this menu to set Supervisor/User Passwords.

Save and Exit Setup

Save CMOS value changes to CMOS and exit setup.

Exit Without Saving

Abandon all CMOS value changes and exit setup.

Chapter

4

Driver Installation

The AOP-8150 comes with a CD-ROM that contains all drivers and utilities that meet your needs.

Follow the sequence below to install the drivers:

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

Step 2 – Install VIA CLE266 Graphics Driver

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

Step 4 – Install Realtek AC97 Audio Driver

Step 5 – Install 6 in 1 Card Reader Driver

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

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

Please read instructions below for further detailed installations.

Installation

Insert the AOP-8150 CD-ROM into the CD-ROM Drive. And install the drivers from Step 1 to Step 5 in order.

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

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

Step 2 – Install VIA CLE266 Graphics Driver

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

Note:

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

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

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

Step 4 – Install Realtek AC97 Audio Driver

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

Note:

Only under Windows® XP environment, you can enable the dual display function. If you want to equip extra graphic card to support dual view function, the local distributor will give you the technical and exact suggestion and solution. Most graphic cards are not compatible with AOP-8150.

Step 5 – Install 6 in 1 Card Reader Driver

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

FAQ

1. Installing Windows® 2000 from a USB CD-ROM Drive may cause a "Stop 0x7B" Error

Answer:

Only if you install Windows® 2000 SP3 or upgraded version, the error will be automatically corrected.

Categorized List of Fixes in Windows® 2000 Service Pack 3 (SP3)

<http://support.microsoft.com/default.aspx?scid=%2fsupport%2fservicepacks%2fwindows%2f2000%2fsp3fixlist.asp>

Q294820 - Installing Windows® 2000 from a USB CD-ROM Drive May Cause a "Stop 0x7B" Error

<http://support.microsoft.com/default.aspx?scid=kb;en-us;294820>

PSS ID Number: 294820

Article Last Modified on 5/28/2003

The information in this article applies to:

Microsoft Windows® 2000 Server SP1

Microsoft Windows® 2000 Server SP2

Microsoft Windows® 2000 Advanced Server SP1

Microsoft Windows® 2000 Advanced Server SP2

Microsoft Windows® 2000 Professional SP1

Microsoft Windows® 2000 Professional SP2

This article was previously published under Q294820

SYMPTOMS

If you are using a Universal Serial Bus (USB) CD-ROM drive to install Windows® 2000 on certain legacy-free computers, you may receive a "Stop 0x000007B" Inaccessible_boot_device error message while booting from the installation CD. Because many legacy-free computers do not have a standard CD-ROM drive or floppy disk drive, the USB CD-ROM drive may be the only method for installing or recovering Windows®.

CAUSE

Windows® 2000 Setup does not support certain USB CD-ROM drives as bootable devices. This causes error message during the Text-mode portion of Setup.

RESOLUTION

Please contact your computer manufacturer for information about obtaining updated Windows® 2000 Setup disks that you can use to boot your computer with a USB CD-ROM device.

STATUS

Microsoft has confirmed that this is a problem in the Microsoft products that are listed at the beginning of this article.