

APC-8172

Socket 478 based
Intel® Pentium® 4 Processors
Industrial Panel PC
With 17" TFT LCD &
Two free expansion slots

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Packing List

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

- 1 APC-8172
- 1 Jumper Cap
- 2 Easy stand
- 1 Waterproof sponge
- 12 Panelmount clips & screws
- 1 Screw Bag
- 1 Power Cord (optional)
- 1 CD-ROM for manual (in PDF format) and drivers

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

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.
16. External equipment intended for connection to signal input/output or other connectors, shall comply with relevant UL / IEC standard (e.g. UL 60950 for IT equipment and UL 2601-1 / IEC 60601 series for medical electrical equipment). In addition, all such combinations – systems – shall comply with the standard IEC 60601-1-1, Safety requirements for medical electrical systems. Equipment not complying with UL 2601-1 shall be kept outside the patient environment, as defined in the standard.

FCC

Warning!



This device complies with Part 15 FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received including interference that may cause undesired operation.

Below Table for China RoHS Requirements

产品中有毒有害物质或元素名称及含量

AAEON Panel PC/ Workstation

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
印刷电路板 及其电子组件	×	○	○	○	○	○
外部信号 连接器及线材	×	○	○	○	○	○
外壳	×	○	○	○	○	○
中央处理器 与内存	×	○	○	○	○	○
硬盘	×	○	○	○	○	○
液晶模块	×	○	○	○	○	○
光驱	×	○	○	○	○	○
触控模块	×	○	○	○	○	○
电源	×	○	○	○	○	○

O: 表示该有毒有害物质在该部件所有均质材料中的含量均在
SJ/T 11363-2006 标准规定的限量要求以下。

X: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出
SJ/T 11363-2006 标准规定的限量要求。

备注:

- 一、此产品所标示之环保使用期限，系指在一般正常使用状况下。
- 二、上述部件物质中央处理器、内存、硬盘、光驱、触控模块为选购品。

Contents

Chapter 1 General Information

1.1 Introduction.....	1-2
1.2 Feature	1-3
1.3 Specification	1-4
1.4 Dimension	1-9

Chapter 2 Hardware Installation

2.1 Safety Precautions	2-2
2.2 Location of Connectors and Jumpers	2-3
2.3 List of Jumpers	2-4
2.4 List of Connectors	2-5
2.5 Setting Jumpers	2-6
2.6 Clear CMOS (JP1)	2-7
2.7 Audio Out Selection (JP2).....	2-7
2.8 COM2 Ring/ +5V/ +12V Selection (JP3).....	2-7
2.9 COM2 RS-232/422/485 Selection (JP4 & JP5)	2-7
2.10 ATX Power Simulate AT Power (JP6).....	2-8
2.11 IDE Connector (CN1)	2-8
2.12 Fan Connector (CN8 & CN24)	2-9
2.13 10/100Base-TX Ethernet Connector (CN11)	2-9
2.14 Option PME Connector (CN12).....	2-9
2.15 Floppy Connector (CN13)	2-10
2.16 LPT Port Connector (CN14).....	2-10

2.17 COM1~4 RS-232/422/485 Serial Port Connector (CN16).....	2-11
2.18 PS/2 Keyboard/ Mouse Connector (CN17).....	2-11
2.19 Digital I/O Port.....	2-12
2.20 VGA Display Connector (CN22).....	2-14
2.21 ATX Power Connector (CN27).....	2-14
2.22 ATX Power 12V Connector (CN28)	2-15
2.23 Floppy Disk Drive & CD-ROM Installation.....	2-16
2.24 Hard Disk Drive Installation.....	2-18
2.25 Easy Stand Installation.....	2-21
2.26 Panelmount Kit Installation.....	2-22
2.27 Waterproof Sponge Installation.....	2-23

Chapter 3 Award BIOS Setup

3.1 System Test and Initialization	3-2
3.2 Award BIOS Setup.	3-3

Chapter 4 Driver Installation

4.1 Installation	4-3
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Chapter

1

**General
Information**

1.1 Introduction

APC-8172 is first Pentium® 4 industrial board in AAEON Panel PC product line. It features a PGA478 socket that can accommodate Pentium® 4 and Celeron® Processor, supporting FSB up to 400/533MHz.

Best performance for multimedia solution

AAEON's APC-8172 also supports DDR DRAM up to 1GB, 4X AGP, and 5.1 channels audio output. It can provide the strong multimedia functions. Therefore APC-8172 can be broadly implemented in several markets, such as Point of sale, point of information (Kiosk), and gaming markets.

Multi-Function Pentium® 4 Platform

If you are looking for powerful multi-media applications, APC-8172 is the one. APC-8172 integrates 17" color TFT LCD, Digital I/O, Audio and Ethernet function; meanwhile it also supports 5 USB2.0, mini PCI, and two PCI slots. With flexible expansion, you get easy access to solutions ranging from Modem, Storage, Sound Card, SCSI card, Audio/Video capture card, Wireless LAN module, to Bluetooth module. Especially for customers whom application is various or changing, APC-8172 reserves more than enough flexibility for future expansion.

1.2 Feature

- 17" TFT SXGA (1280 x 1024) LCD
- All-in-one SBC supports Socket 478 based Intel® Pentium® 4 Processor
- Anti-vibration disk drive bay for HDD
- Water-proof and anti-scratch IP-65 certified aluminum front panel with USB port certification
- Two free PCI expansion slots
- Digital I/O (8 in, 8 out as Default, up to 16 in or 16 out)
- Resistive Touch screen (Optional)

1.3 Specification

System

- Construction Heavy-duty steel chassis & IP-65 certified aluminum front panel (or optional stainless steel front panel)
- CPU Socket 478 based Pentium® 4(.13 μ) / Celeron® Processors up to 3.06GHz with FSB 400/533MHz (APC-8172 with 250W AC Input Power Supply), up to 2.4GHz with FSB 400/533 MHz (APC-8172 with 200W 24V DC Input Power Supply)
- Memory 184-pin DIMM x 1, supports DDR 200/266/333MHz up to 1GB
- Display 17" SXGA color TFT LCD
- LCD / CRT Intel® i845GV, AGP 4X Controller
- Ethernet Intel® 82562 10/100 Base-TX Ethernet controller
- I/O Chipset 3 serial ports: 2 x RS-232, 1 x RS-232/422/485 (COM 4 is reserved for touch screen); 1 parallel port (supports ECP/EPP); 1 PS/2 mouse and keyboard

- port; 1 VGA port

Mic-in, Line-in, Line-out, S/P DIF 5.1 channel audio port

GPIO: 16 in or 16 out
- Storage Disk Drive Anti-vibration 2.5”HDD, Slim FDD and Slim CD-ROM
- USB ports 4 USB 2.0 ports on rear panel; 1 USB 2.0 port on front panel (Lockable by BIOS)

Because of USB chipset limitation, front USB port and Card reader USB interface are linked together, when user “disable” front USB port (USB Port 3 controller) , the card reader must be forced to disable at the same time
- Front Panel PMS 2965C (Dark Blue)
- Mounting Panelmount, VESA 75/100mm holes
- Expansion slots 2 PCI slots

1 Mini PCI socket

6-in-1 card reader

Supports CompactFlash® (Type I/II), Secure Digital, Multi Media Card,

Memory Stick (PRO) and Smart Media

- **Power Supply** Universal 250W switching power supply with Active PFC

24V DC Input 200W Power Supply
 - AC input 250W (standard offer)
Output rating: 250W
Input voltage: 100VAC~240VAC @ 47~63Hz
Output voltage: +3.3V @ 16A, +5V @ 25A,
+12V @ 13A, +5VSB @ 2A,
-5V @ 0.3A, -12V @ 0.8A
 - 24V DC input:
Output rating: 200W (Maximum)
Input voltage: 19V DC~32V DC @ 16A (Maximum)
Output voltage: +5V @ 25A, +12V @ 12A,
+3.3V @ 15A, -5V @ 0.5A, -12V @ 1A
- **OS support** Windows 2000, Windows XP, Windows XP Embedded (Optional)
- **Dimension** 19" x 15.7" x 5.7" (483mm x 399mm x 145mm)
(W x H x D)
- **Carton Dimension** 24.4" x 20.6" x 13.8" (620mm x 522mm x 351mm)
(W x H x D)
- **Gross Weight** 39.2 lb (17.8 Kg)

LCD Specification

- Display Type 17" Color TFT LCD
- Max. Resolution 1280 x 1024
- Max. Colors 256K
- Dot Size (mm) 0.264 x 0.264
- Luminance (cd/m²) 260 (TYP)
- Viewing angle 140°(H)
140°(V)
- Back Light MTBF 50,000
(Hrs)

Touch Screen (Optional)

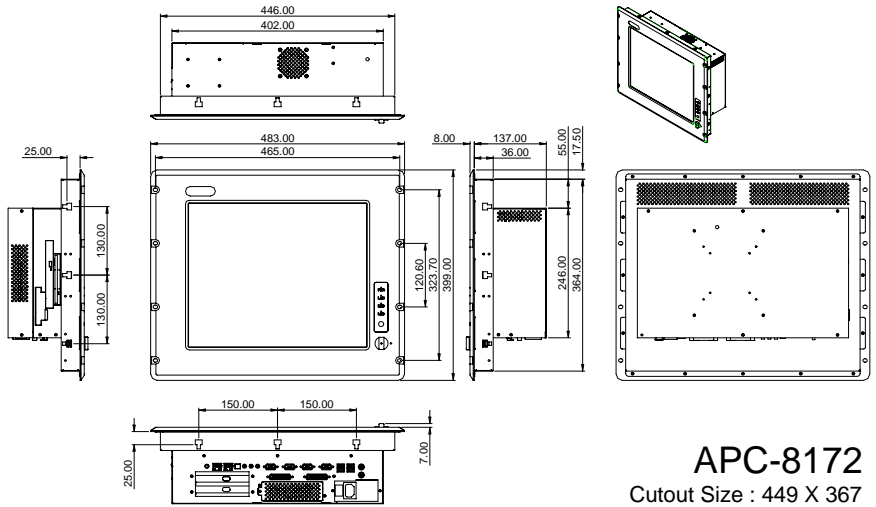
- Type 8-wire, analog resistive
- Resolution 2048 x 2048
- Light transmission >75%
- Lifetime 1 million activations
- OS support Windows 2000, Windows XP, Windows XP Embedded

Environment Specifications

- Operating temperature 0°C ~50°C (32°F~122°F)
- Storage temperature -20°C~60°C (-4°F~140°F)
- Operating humidity 10 to 90% @35°C, non-condensing
- Vibration 1.5G / 5~500Hz (Random/ operation)
- Shock 15G peak acceleration (11 msec. duration)/ operation
- EMC CE/FCC Class B (APC-8172 with 250W AC Input Power Supply);
CE/FCC Class A (APC-8172 with 200W DC Input Power Supply)

1.4 Dimension

Unit : mm



APC-8172
Cutout Size : 449 X 367

Chapter

2

**Hardware
Installation**

2.1 Safety Precautions

Warning!



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

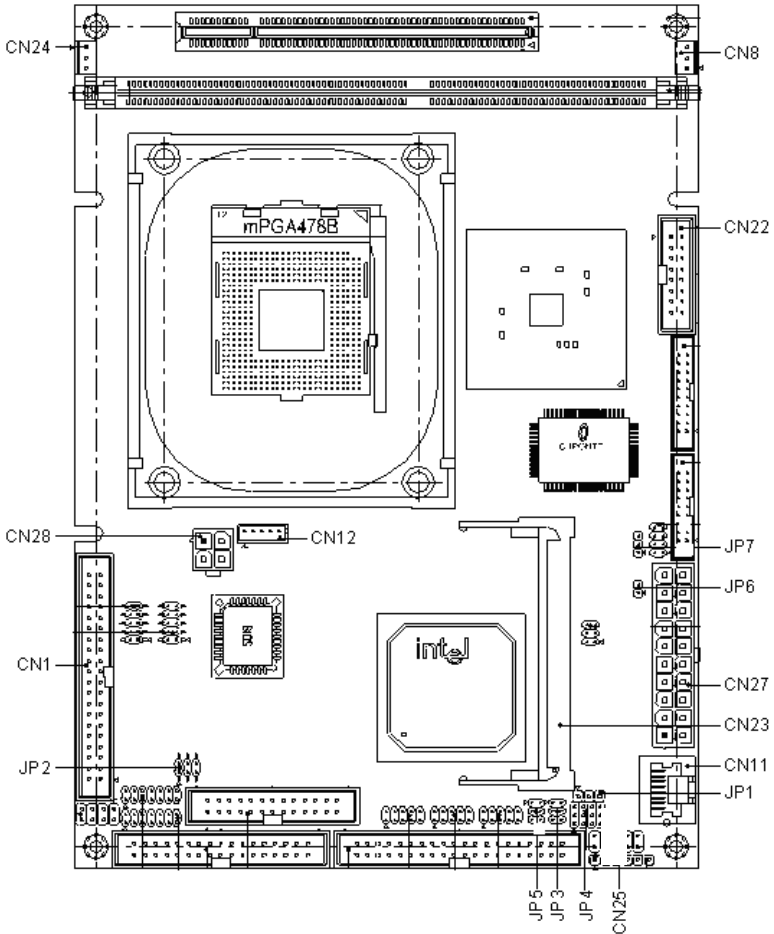
Caution!



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

2.2 Location of Connectors and Jumpers

Component Side



2.3 List of Jumpers

There are a number of jumpers in the board that allow you to configure your system to suit your application.

The table below shows the function of each jumper in the board:

Jumpers

Label	Function
JP1	Clear CMOS
JP2	Audio Out Select
JP3	COM2 Ring/+5V/+12V Selection
JP4	COM2 RS-232/422/485 Selection
JP5	COM2 RS-232/422/485 Selection
JP6	ATX Power simulate AT Power
JP7	LCD Voltage Selection

2.4 List of Connectors

There are a number of connectors in the board that allow you to configure your system to suit your application. The table below shows the function of each connector in the board:

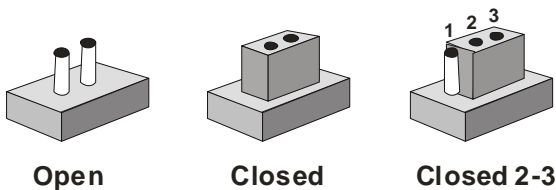
Connectors

Label	Function
CN1	EIDE HDD Connector
CN8, CN24	Fan Connector
CN11	10/100Base-TX Ethernet Connector
CN12	Option PME Connector
CN22	VGA Display Connector
CN23	MINI PCI SLOT
CN25	Front Panel
CN27	ATX Power Connector
CN28	ATX Power 12V Connector

2.5 Setting Jumpers

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

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



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

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

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

2.6 Clear CMOS (JP1)

Warning:

To avoid damaging the computer, always turn off the power supply before setting “Clear CMOS.” Before turning on the power supply, set the jumper back to “Normal.”

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

2.7 Audio Out Selection (JP2)

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

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

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

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

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

2.10 ATX Power Simulate AT Power (JP6)

JP6	Function
1-2 ON	ATX Power Simulate AT Power
1-2 OFF	ATX Standard (Default)

2.11 IDE Connector (CN1)

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

39	LED	40	GND
----	-----	----	-----

2.12 Fan Connector (CN8 & CN24)

Pin	Signal
1	GND
2	+12V
3	FAN SPEED SENSE

2.13 10/100Base-TX Ethernet Connector (CN11)

Pin	Signal	Pin	Signal
1	TX+	9	N.C.
2	TX-	10	N.C.
3	RX+	11	GND
4	N.C.	12	GND
5	N.C.	13	N.C.
6	RX-	14	N.C.
7	N.C.	15	N.C.
8	N.C.	16	N.C.

2.14 Option PME Connector (CN12)

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

2.15 Floppy Connector (CN13)

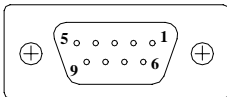
Pin	Signal	Pin	Signal
1	GND	2	REDWC
3	GND	4	N.C.
5	GND	6	DS1
7	GND	8	INDEX
9	GND	10	MOTOR A
11	GND	12	DRIVE SELECT B
13	GND	14	DRIVE SELECT A
15	GND	16	MOTOR B
17	GND	18	DIR
19	GND	20	STEP
21	GND	22	WRITE DATA
23	GND	24	WRITE GATE
25	GND	26	TRACK
27	GND	28	WRITE PROTECT
29	GND	30	READ DATA
31	GND	32	SIDE1
33	GND	34	DISK CHANGE

2.16 LPT Port Connector (CN14)

Pin	Signal	Pin	Signal
1	STROBE	2	AFD
3	PTD0	4	ERROR
5	PTD1	6	INIT
7	PTD2	8	SLIN

9	PTD3	10	GND
11	PTD4	12	GND
13	PTD5	14	GND
15	PTD6	16	GND
17	PTD7	18	GND
19	ACK	20	GND
21	BUSY	22	GND
23	PE	24	GND
25	SELECT	26	N.C.

2.17 COM1~4 RS-232/422/485 Serial Port Connector (CN16)



Only COM 2 support “Wake on Ring” function; COM 4 is reserved for touch screen.

Pin	Signal	Pin	Signal
1	DCD (422TXD-/485DATA-)	2	DSR
3	RXD (422RXD+)	4	RTS
5	TXD (422TXD+/485DATA+)	6	CTS
7	DTR (422RXD-)	8	RI (+5V/12V)
9	GND	10	N.C.

2.18 PS/2 Keyboard/Mouse Connector (CN17)

Pin	Signal
1	KB_DATA
2	KB_CLK
3	GND

4	+5V
5	MS_DATA
6	MS_CLK

2.19 Digital I/O Port

Pin	Signal	I/O Address Setting
1	Digital-IN / OUT	801H
2	Digital-IN / OUT	801H
3	Digital-IN / OUT	801H
4	Digital-IN / OUT	801H
5	GND	
6	GND	
7	Digital-IN / OUT	801H
8	Digital-IN / OUT	801H
9	Digital-IN / OUT	801H
10	Digital-IN / OUT	801H
11	GND	
12	GND	
13	Digital-IN / OUT	841H
14	Digital-IN / OUT	841H
15	Digital-IN / OUT	841H
16	Digital-IN / OUT	841H
17	GND	
18	GND	
19	Digital-IN / OUT	841H
20	Digital-IN / OUT	841H
21	Digital-IN / OUT	841H

22	Digital-IN / OUT	841H
23	+5V	
24	+5V	
25	+5V	

The pin definitions and registers mapping are illustrated below:

Address: 801H

4 in / 4 out

Pin1	Pin2	Pin3	Pin4	Pin7	Pin8	Pin9	Pin10
GPI 27	GPI 26	GPI 25	GPI 24	GPO 23	GPO 22	GPO 21	GPO 20
MSB							LSB

8 in

Pin1	Pin2	Pin3	Pin4	Pin7	Pin8	Pin9	Pin10
GPI 27	GPI 26	GPI 25	GPI 24	GPI 23	GPI 22	GPI 21	GPI 20
MSB							LSB

8 out

Pin1	Pin2	Pin3	Pin4	Pin7	Pin8	Pin9	Pin10
GPO 27	GPO 26	GPO 25	GPO 24	GPO 23	GPO 22	GPO 21	GPO 20
MSB							LSB

Address: 841H

4 in/ 4 out

Pin13	Pin14	Pin15	Pin16	Pin19	Pin20	Pin21	Pin22
GPI 27	GPI 26	GPI 25	GPI 24	GPO 23	GPO 22	GPO 21	GPO 20
MSB							LSB

8 in

Pin13	Pin14	Pin15	Pin16	Pin19	Pin20	Pin21	Pin22
GPI 27	GPI 26	GPI 25	GPI 24	GPI 23	GPI 22	GPI 21	GPI 20
MSB							LSB

8 out

Pin13	Pin14	Pin15	Pin16	Pin19	Pin20	Pin21	Pin22
GPI 27	GPI 26	GPI 25	GPI 24	GPI 23	GPI 22	GPI 21	GPI 20
MSB							LSB

2.20 VGA Display Connector (CN22)

Pin	Signal	Pin	Signal
1	Red	9	GND
2	VCC	10	HSYNC
3	Green	11	GND
4	GND	12	VSYNC
5	Blue	13	GND
6	N.C	14	SCL
7	N.C	15	GND
8	SDA	16	N.C

2.21 ATX Power Connector (CN27)

Pin	Signal	Pin	Signal
1	+3.3V	11	+3.3V
2	+3.3V	12	-12V
3	GND	13	GND
4	+5V	14	PS_ON
5	GND	15	GND

6	+5V	16	GND
7	GND	17	GND
8	POWER OK	18	-5V
9	+5VSB	19	+5V
10	+12V	20	+5V

2.22 ATX Power 12V Connector (CN28)

Pin	Signal	Pin	Signal
1	GND	2	GND
3	+12V	4	+12V

2.23 Floppy Disk Drive & CD-ROM Installation

We will guide you how to lock Floppy Disk Drive (FDD) and CD-ROM together. Please see the detail as follows.

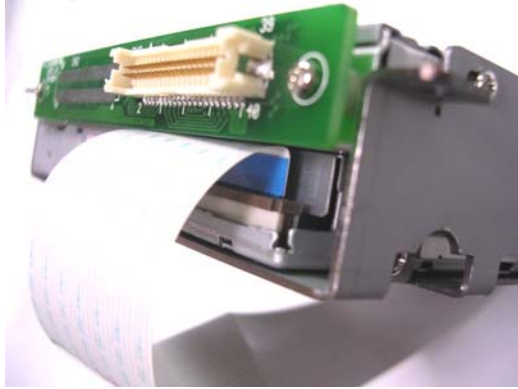
Step 1: Plug in FDD cable



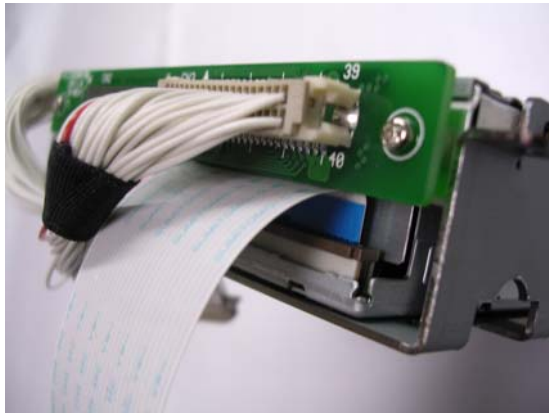
Step 2: Fasten the FDD and CD-ROM together with two brackets on the both sides symmetrically.



Step 3: Fasten the transferring bar with a pair of screws on the back of the CD-ROM.



Step 4: Plug in CD-ROM Cable



2.24 Hard Disk Drive Installation

In the following, we will guide you how to install Hard Disk Drive (HDD). Make sure that all parts are provided before you start the installation.

Step 1: Lock with the screws as the illustration shown.



Step 2: Cover the screws with four pieces of anti-vibration rubbers



Step 3: There're two pieces of iron surfaces as the illustration shown.



Step 4: Locate the HDD on one piece of the iron surface and fasten it with the screws.

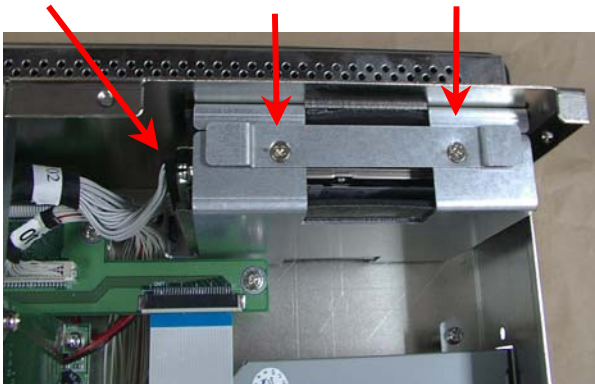


Step 5: Cover it with another piece of iron surface and lock it with screws.



Step 6: Fix the HDD module into the APC-8152 chassis and plug the cable in.

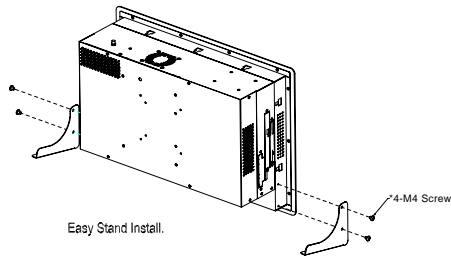
Plug the cable *Cover the iron and fix the HDD module with the screws*



2.25 Easy Stand Installation

There're two L-shaped easy stands come with the product. Refer to the following illustration to install it.

1. Fix the L-shaped easy stands with the screws on both sides of the monitor. See the illustration below:



2.26 Panelmount Kit Installation

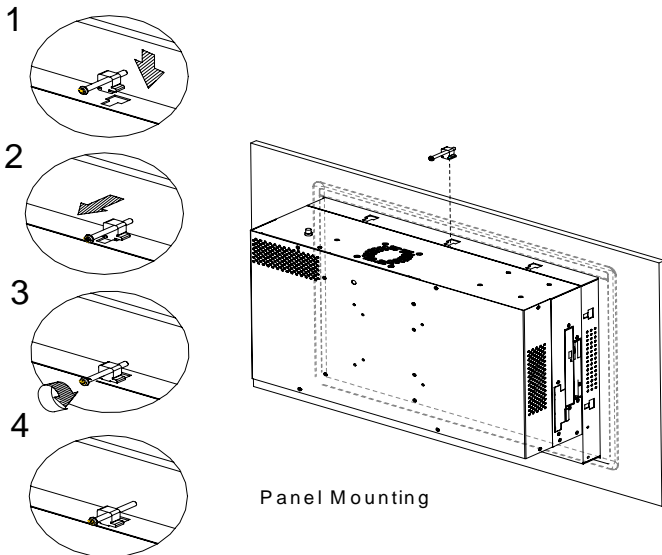
Some screw sets will come with the product for user to mount the monitor on the wall. See the steps below along with the illustration.

Step 1: Bore the screw into the screw nut.

Step 2: Locate the screw set into the hole around the monitor as the right illustration and pull it back to lock the screw set on the hole.

Step 3: Turn the screw around to make it tight until it is closed to the wall.

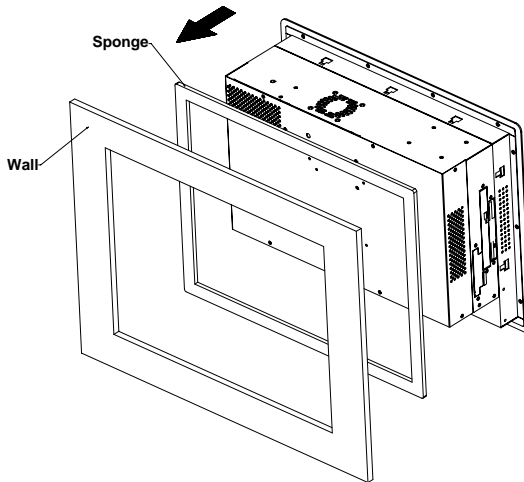
Step 4: Lock the monitor to the wall with the screw set which mean you've done a good job.



2.27 Waterproof Sponge Installation

The following illustration shows you how to lodge the waterproof sponge in the back of the monitor set.

1. Lodge the Sponge in the back of the monitor set.
2. Locate the monitor set on the wall.



Chapter

3

**Award
BIOS Setup**

3.1 System Test and Initialization

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

Press <F1> to RESUME

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

System configuration verification

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

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

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

The APC-8172 CMOS memory has an integral lithium battery backup for data retention. However, you will need to replace the complete unit when it finally runs down.

3.2 Award BIOS Setup

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

Entering Setup

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

Standard CMOS Features

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

Advanced BIOS Features

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

Advanced Chipset Features

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

Integrated Peripherals

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

Power Management Setup

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

PnP/PCI Configurations

This entry appears if your system supports PnP/PCI.

PC Health Status

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

Frequency/Voltage Control

Use this menu to specify your settings for auto detect DIMM/PCI clock and spread spectrum.

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.

You can refer to the "AAEON BIOS Item Description.pdf" file in the CD for the meaning of each setting in this chapter.

Limitation:

1. Due to Intel chipset limitation, when CMOS was set up to "LCD + CRT", the LCD display will not support full-screen appearance.
2. Because of USB chipset limitation, front USB port and Card reader USB interface are linked together, when user "disable" front USB port (USB Port 3 controller) , the card reader must be forced to disable at same time.

Chapter

4

**Driver
Installation**

The APC-8172 comes with a AutoRun CD-ROM that contains all drivers and utilities that can help you to install the driver automatically. Insert the driver CD, the driver CD-title will auto start and show the installation guide. If not, please follow the sequence below to install the drivers.

Follow the sequence below to install the drivers:

- Step 1– Install Intel INF Update For Windows 9x-XP Driver
- Step 2– Install Intel 845G Graphics Driver
- Step 3– Install Intel Application Accelerator for Windows 95-XP Driver
- Step 4– Install Intel LAN Driver
- Step 5– Install Realtek AC97 codec Driver
- Step 6– Install Card Reader Driver
- Step 7– Install Touch Screen 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/.

Please read instructions below for further detailed installations.

4.1 Installation:

Insert the APC-8172 CD-ROM into the CD-ROM drive. And install the drivers from Step 1 to Step 7 in order.

Step 1 - Install Intel INF Update For Windows 9x-XP Driver

1. Click on the **Step 1-Intel INF Update for Windows 9X-XP** folder and then double click on the ***infinst_autol.exe***
2. Follow the instructions the window shows
3. The system will install the driver automatically

Step 2 - Install Intel 845G Graphics Driver

1. Click on the **Step 2-Intel 845G Graphics Driver** folder and then double click on the ***win2k_xp14103.exe***
2. Follow the instructions the window shows
3. The system will install the driver automatically

Step 3 - Install Intel Application Accelerator for Windows 95-XP Driver

1. Click on the **Step 3-Intel Application Accelerator for Windows 95-XP** folder and then double click on the ***iaa23_enu.exe***
2. Follow the instructions the window shows
3. The system will install the driver automatically

Step 4 - Install Intel LAN Driver

We strongly recommend that you shall not install LAN driver by clicking on Autorun.exe. Please follow the steps in order to

finish the process of installation.

1. Click on **Start** button → **Settings** → **Control Panel** → **System**
2. Select **Device Manager** under the **Hardware** category
3. Double click on the **Ethernet controller** and select **update Driver** button under the **Driver** category
4. Click **Next** twice and tick the **Specify a location** option
5. Click **Next** and choose a route where you want place the folders on before you click on **open**
6. Click **Next** → **Yes** → **Finish** and the window will show you how to finish the installation process

Note:

We strongly recommend that you shall not install LAN driver by clicking on Autorun. exe

Step 5 - Install Realtek AC97 codec Driver

1. Click on the **Step 5-Realtek AC97 codec Driver** folder and then double click on the **wdm_a355.exe**
2. Follow the instructions the window shows
3. The system will install the driver automatically

Step 6 - Install Card Reader Driver

1. Click on the **Step 6-Card Reader Driver** folder and then double click on the **Setup.exe**
2. Follow the instructions the window shows
3. The system will install the driver automatically

Step 7 - Install Touch Screen Driver

1. Click on the **Step 7-Touch Driver** folder and then double click on the **Setup.exe**
2. Follow the instructions the window shows you
3. The system will install the driver automatically

Touch screen Driver installation Guide won't be explained in this section. You can read the detailed touch screen driver Guide in the folder of touch screen driver.

Limitation:

The limitations you may need to notice when you start to install the driver. For the sake of USB4 and USB5 community of linkage, the card reader must be forced to disable when the users "disable" front USB port.