

**AOP-8060**

SiS SoC 200MHz Processor  
Based Fanless Operator Panel PC  
with 5.7" STN LCD  
Or 6.4" TFT LCD

AOP-8060WT Manual 1st Ed. July 2005

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## **Packing List**

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

- 1 AOP-8060 series Fanless Panel PC
- 1 CompactFlash™ storage card
- 1 PS/2 Y type keyboard / mouse cable
- 1 Mounting bracket and screws (if ordered)
- 1 CD-ROM for manual (in PDF format) and Windows CE SDK or Linux

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

**Warning**

1. Use a 3 V @ 220 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. CompactFlash: Turn off power before inserting or removing CompactFlash storage card.

## Safety & Warranty

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1. Read these safety instructions carefully.
2. Keep this user's manual for later reference.
3. Disconnect this equipment from any power 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. We disclaim all responsibility for the accuracy of any statements contained herein.

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Chapter

1

**General  
Information**

## **Introduction**

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The AOP-8060 operator panel is a SiS Low power processor computer that is designed to serve as a human machine interface (HMI). It is a PC-based system with 5.7" color STN or 6.4" color TFT LCD display, on-board Ethernet controller, multi-COM port interfaces and an audio controller. With a built-in CompactFlash socket, the AOP-8060 is as compact and user friendly as a multi-function computer. 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 DIN Rail mounted.

For system integrators, this simple, complete, compact and highly integrated system let you easily build a operator panel 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 vending machine, and car park automation. Our operator panel is a reliable, cost-effective solution to your application's processing requirements.

## Specification

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### System

- CPU Onboard SiS 200MHz SoC
- Memory Onboard 64MB or 128MB SDRAM
- LCD / CRT Controller SiS SoC, share system memory up to 32 MB
- Ethernet Realtek 8100 10/100Base-Tx RJ-45 connector x 1
- I/O Port 2 serial ports:  
1 x RS-232 (D-SUB 9 connector),  
1 x RS-232/422/485 (D-SUB 25 connector)  
1 parallel port (supports ECP/EPP)  
1 PS/2 mouse and keyboard port  
2 USB 1.1 ports  
Line out  
1 digital I/O (support up to 8 in and 8 out)
- Storage Disk Drive Type II CompactFlash™ slot
- OS Support Windows CE Net 4.2,  
Embedded Linux

**Mechanical**

- Construction Plastic chassis (IP65 certified front panel)
- Front Panel Color PMS 2965C (Dark Blue)
- Mounting Panel Mount, VESA 75mm holes, DIN Rail (Optional)
- Dimension 7.8" (W) x 6" (H) x 1.7" (D)  
(198mm x 152mm x 44mm)
- Gross Weight 1.5 Kg

**Environmental**

- Operating Temperature 32 ~104 (0 ~40 )
- Storage Temperature -4 ~140 (-20 ~60 )
- Operating Humidity 10 to 90%@35 , non-condensing
- Vibration Random Operation 1G, 5-500Hz
- Shock 15G peak acceleration (11 msec.duration)
- EMC CE/FCC Class A
- Power Supply DC Input 25W  
Input: +10V<sub>DC</sub>~30V<sub>DC</sub>

**LCD**

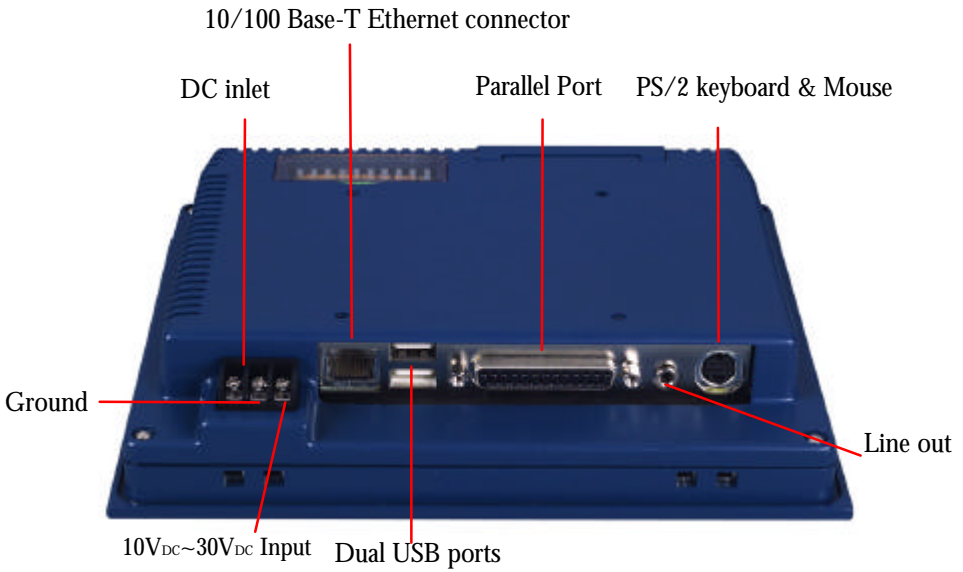
Model	AOP-8060HT	AOP-8060WT
Display Type	5.7" color STN LCD	6.4" color TFT LCD
Max. Resolution	320 x 240	640 x 480

Max. Colors	256K	262K
Dot Size	0.12mm x 0.36mm	0.204mm x 0.204mm
Luminance	200 cd/m <sup>2</sup> (TYP.)	250 cd/m <sup>2</sup> (TYP.)
Viewing Angle	90 °(H) 80 °(V)	90 °(H) 50 °(V)

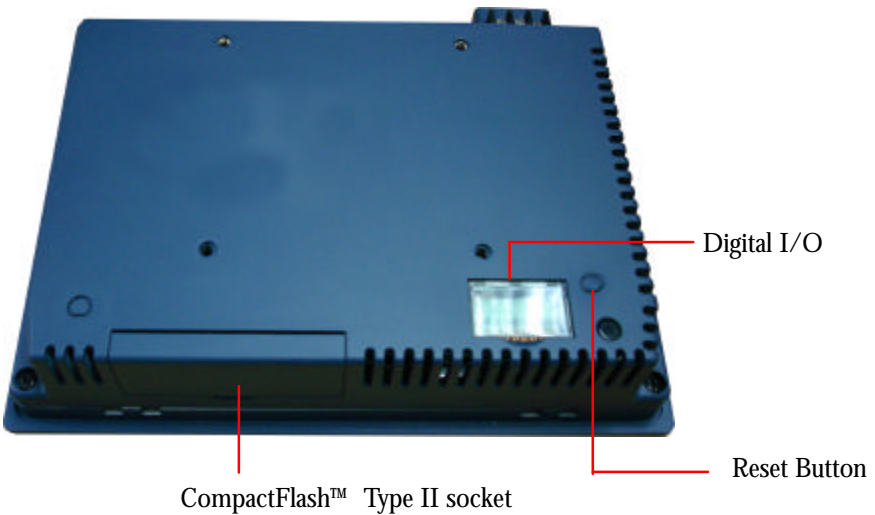
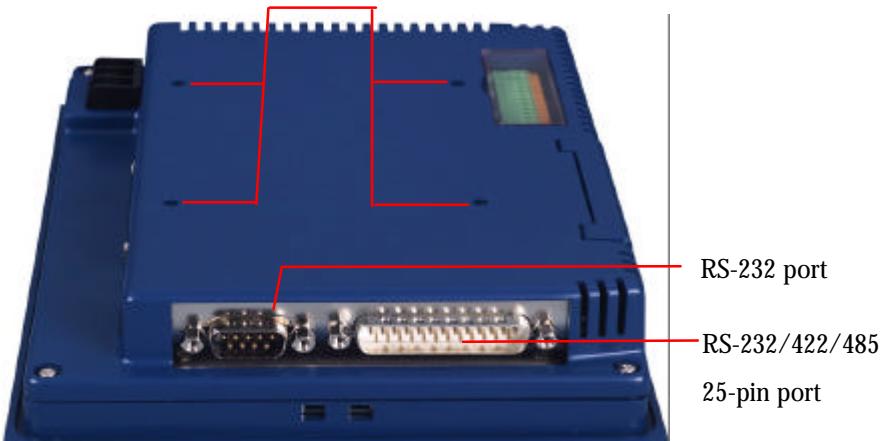
### Touch screen

- Type 4-wire, analog resistive
- Light Transmission 79%
- Lifetime 1 million activations
- OS Support Windows CE.Net 4.2,  
Embedded Linux (Optional)

*Note: 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. We 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.*

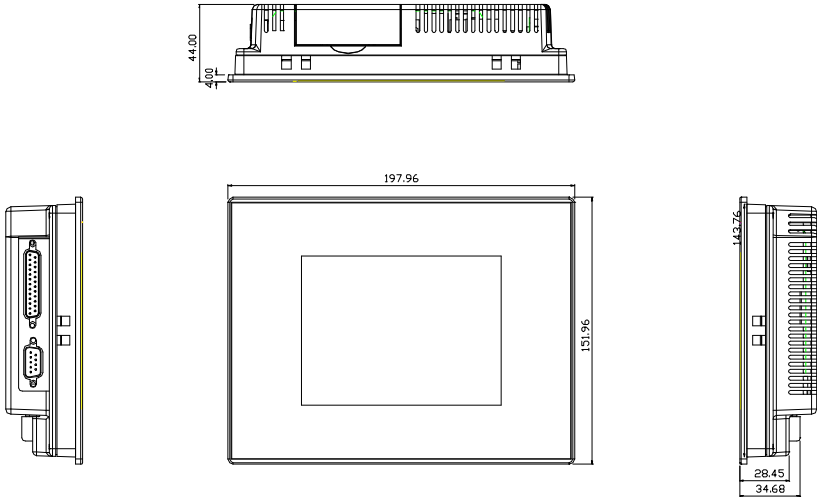


VESA 75mm screw holes



## Dimension

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Chapter

2

**Hardware  
Installation**

## Panel Mount Installation

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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.

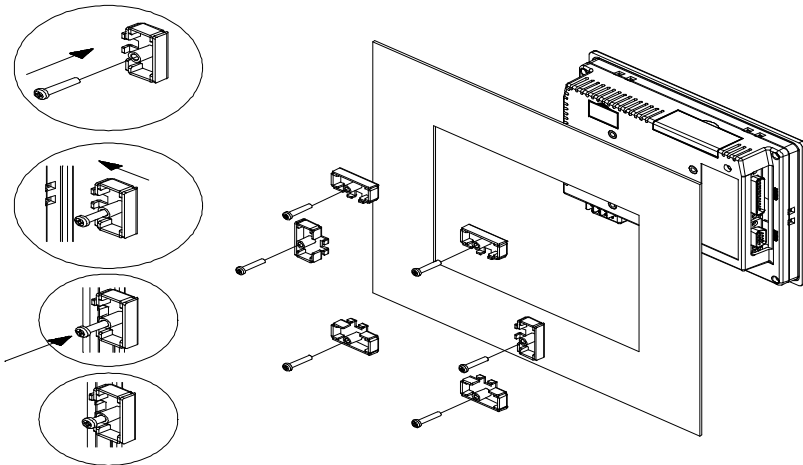
Step 1: Place the mounting brackets and plug the screw.

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

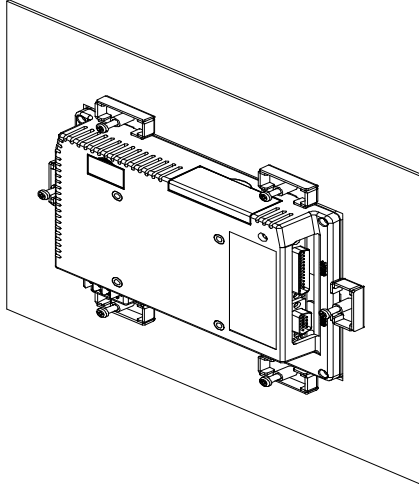
Step 3: Fix the monitor with the mounting set by screwing it.

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.

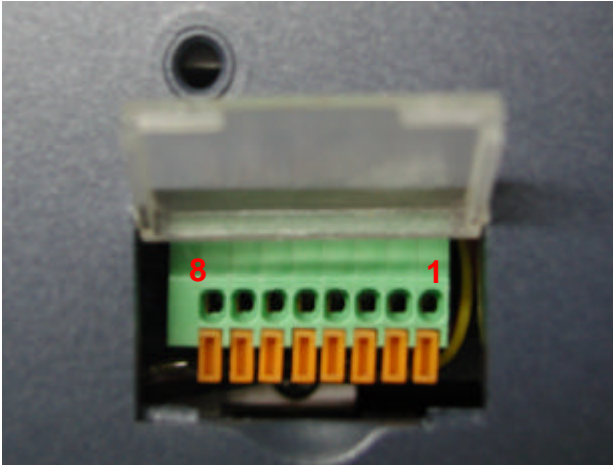


## Complete Illustration



## Digital I/O Connector (CN14)

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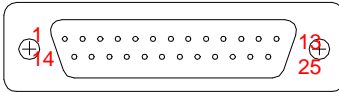


Pin	Signal
1	Input 1 / Output 1
2	Input 2 / Output 2
3	Input 3 / Output 3
4	Input 4 / Output 4
5	Input 5 / Output 5
6	Input 6 / Output 6
7	Input 7 / Output 7
8	Input 8 / Output 8

## COM1 Connector (CN9)

Pin	Signal	Pin	Signal
1	DCD1	2	RXD1
3	TXD1	4	DTR1
5	GND	6	DSR1
7	RTS1	8	CTS1
9	RI1		

## COM 2 Connector (CN10)



Pin	Signal	Pin	Signal
1	N.C.	2	N.C.
3	N.C.	4	N.C.
5	N.C.	6	N.C.
7	DTR2	8	N.C.
9	RI2	10	485TX+
11	485TX+	12	N.C.
13	N.C.	14	TXD2
15	RXD2	16	RTS2
17	CTS2	18	DSR2
19	N.C.	20	DCD2
21	N.C.	22	485RX-
23	485TX-	24	N.C.
25	GND		

## D-SUB 25 Connector

Chapter

3

**Win CE  
Installation**

## Win CE Installation Steps

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The CF card attached in the package has been completed Win CE installation. If you need to re-install Win CE on your purchased CF card, please follow the steps:

1. You will find the CD with Win CE and Free-DOS booting files in the package. Insert CD and blank CF card to your PC.
2. Boot up your PC with the CD.
3. After the successful boot-up, make sure where the CF card is (Disk C, D, E, F etc.) and then key in **SYS X:**. X is the disk of your CF card, for example:

CF is in Disk **C** → key in **SYS C:**

CF is in Disk **E** → key in **SYS E:**

4. Copy all files under the **OS** folder in the CD (including **autoexec. bat**, **config. sys**, **fdxms. sys**, **loadcepc. exe** and **nk. bin**) to CF card
5. Insert your CF card to AOP-8060.
6. Reboot up your CF card to execute Win CE.