

PPC-5050A
15" TFT Panel PC Ver 1.0



Manual Revision 1.0
October 7,2002

Copyright Notice

©Copyright 2002 by ICP Electronics Inc. All Rights Reserved.

Revision: 1.0. Oct., 7 2002.

The information in this document is subject to change without prior notice in order to improve reliability, design and function and does not represent a commitment on the part of the manufacturer.

In no event will the manufacturer be liable for direct, indirect, special, incidental, or consequential damages arising out of the use or inability to use the product or documentation, even if advised of the possibility of such damages.

This document contains proprietary information protected by copyright. All rights are reserved. No part of this manual may be reproduced by any mechanical, electronic, or other means in any form without prior written permission of the manufacturer.

Trademarks

PPC-5050A is a registered trademark of ICP Electronics Inc. IBM PC is a registered trademark of International Business Machines Corporation. Intel is a registered trademark of Intel Corporation. Other product names mentioned herein are used for identification purposes only and may be trademarks and/or registered trademarks of their respective companies. If you have any questions or need other information, please visit to our web site.

<http://www.iei.com.tw>

Revision History

Revision	Revision Note	Date
1.00	Initial release of the PPC-5050A user's manual	Oct. 7 20002

Note:

The author assumes no responsibility for any errors or omissions that may appear this manual nor does the author make a commitment to update the information contained herein.

Table of Contents

1. INTRODUCTION.....	4
1.1 CHECKLIST	4
1.2 FEATURES.....	4
1.3 SPECIFICATIONS.....	5
1.4 MECHANICAL DIMENSION	9
2. SYSTEM SETUP	10
2.1 THE REVERSE SIDE OF PPC-5050A.....	10
2.2 THE REVERSE SIDE OF THE REAR CABINET	11
2.3 THE SIDE VIEW OF PPC-5050A.....	12
2.4 POS-566/370 CPU BOARD INSTALLATION	13
2.5 POWER SUPPLY INSTALLATION.....	14
2.6 DRIVE DISK INSTALLATION.....	15
2.6.1 <i>FDD Installation</i>	15
2.6.2 <i>HDD Installation</i>	16
2.6.3 <i>CD-ROM Installation</i>	17
2.7 PANEL MOUNTING	18
2.8 WALL MOUNTING	19
2.9 ARM MOUNTING	20
2.10 RACK MOUNTING	21
APPENDIX A EXPLODED DIAGRAM	22
APPENDIX B USER MODE OSD FEATURE DESCRIPTION	23
APPENDIX C DISPLAY INTERFACE.....	26
APPENDIX D TOUCH PANEL CONTROLLER.....	27

1. Introduction

The PPC-5050A, 15" LCD TFT Panel PC, takes advantages of modern flat-panel display, POS-566/370 CPU board, drive spaces and power supply for minimum size. It is an IBM PC/AT compatible computer specially designed to meet the applications for industrial environment.

1.1 Checklist

Item	Description	Qty.
1	Y Cable	1
2	Power Cable	1
3	Wall Mounting kit	1
4	BOLT M4*8	4
5	Mounting Clip	10
6	Round Head Screw M5*50	10
7	Round Head Screw M3*6	10
8	Flat Head Screw M3*6	5
9	Screw Accessories (19600-000103)	1
10	Screw Accessories (19600-000104)	1
11	Screw Accessories (19600-000105)	1
12	Screw Accessories (19600-000063)	1
12	A49	1
13	SLIM-05	1
14	JUMPER Pitch:2.0	10
15	POS-566/370 User's Manual	1
16	PPC-5050 User's Manual	1
17	CD-ROM Driver	1
18	Touch Panel Pen (Option)	1
19	Touch Panel Driver (Option)	1

1.2 Features

CPU Board

PPC-5050A is designed for POS-566/370 CPU board. The POS-566/370 board is a LPX specification board, which equipped with high performance socket 370 Celeron Pentium III[®] CPU, LCD/CRT and 10/100Mbps Ethernet, designed for the system manufacturers, integrators, or VARs to provide all the performance, reliability, and quality.

LCD Display

The PPC-5050A is equipped with a 15" TFT LCD.

Power Supply

The standard industrial power supply of PPC-5050A is equipped with ACE-916AP.

Touch Screen (option)

Dynapro resistive touch screen.

HDD, FDD & CD-ROM

It is suggested to be equipped with one 2.5" internal HDD, one slim FDD, and one slim CD-ROM.

1.3 Specifications

- Disk Drive Bay: Support one 2.5" HDD, one slim FDD, and one slim CD-ROM.
- Best solution for Panel mount man machine interface.
- Dimensions : Front Panel: 410mm x 309mm x 9mm (WxHxD)
Cabinet: 383.6mm x 282.6mm x 97.6mm (WxHxD)
- **LCD Display:** TTL LCD connector interface to support screen reverse function.

Display Model	CHI MEI
Display Type	15" TFT color
LCD model	M150X2-T05
Resolution	1024x768
Display colors	262,144 color
Brightness	250 cd/m ²
LCD MTBF	50,000 hrs
Backlight MTBF	50,000 hrs
Supply Voltage	3.3V

- **Dynapro Touch Screen (option)**

Type: Analog Resistive

Resolution: Continuous

Light transmission: Typical value 75%

Surface Hardness: 4H (Test condition: ASTM D3363-92A)

8-wire touch screen

Support driver: Supports Linux,MS-DOS,Windows 3.1/95/
98/CE,ME/2000/NT,OS/2,MAC,etc.

- **Environmental specifications**

Operating Temperature : 0 ~ 50°C

Relative Humidity: 5~85% @40°C , non-condensing

Vibration: 5 to 17 Hz, 0.1"double-amplitude displacement,
17 to 500 Hz, 1.5 G peak to peak.

- **Industrial Power Supply: ACE-916AP series Power Supply**

High reliability triple outputs switching Power Supply with height 40.6mm only

Standard Power Supply: ACE-916AP

Optional Power Supply: ACE-916A, ACE-816A/ AP and ACE-815T

Operating temperature: -0°C to 50°C

Vibration: 10-55Hz at 2G 3 min. period, 30 min. along X, Y, and Z axis

Shock: 10G for 20ms once on each X, Y, and Z axis

Safety: meet UL1950/TUV: EN60950

EMI: meet FCC class B /CISPR:EN 55022 class B/CE: Harmonic EN61000-3-2

Warning: Whenever you need to take off a part for either maintenance or upgrading purpose, you should switch off the power supply and unplug the power cord first.

- **Specifications of POS-566 CPU Board:**

The POS-566/566L 450MHz K6-3 / Pentium® Processor Multimedia POS Control SBC provides the following specifications:

- **CPU:** Pentium® MMX up to 233Mhz, AMD® K6®/K6®-2/K6®-3 up to 450MHz, IDT C6, Cyrix 6x86MX, etc. Processor
- **RAM:** 3x DIMM sockets up to 768MB SDRAM
- **Cache memory:** 512KB Pipelined Burst SRAM on board
- **Bus:** PCISA bus expansion to support ISA and PCI bus signal
- **Chipset:** Ali 5, support 100MHz CPU clock
- **LCD/CRT Controller:** CHIPS 65555 2MB EDO RAM on board
- **Support 3.3V or 5V flat panel.**
- **Support Mono, Color STN, TFT, EL,.. wide range flat panel.**
- **Optional One Channel or Two Channels LVDS module.**
- **10/100Mbps Ethernet Controller:** Realtek RTL8139 IEEE 802.u 100 BASE-TX standard Dual Auto-sensing interface to 10MBps or 100MBps networks

RJ45 connector for 10BASE-T and 100BASE-TX
Full duplex capability, full software driver support.

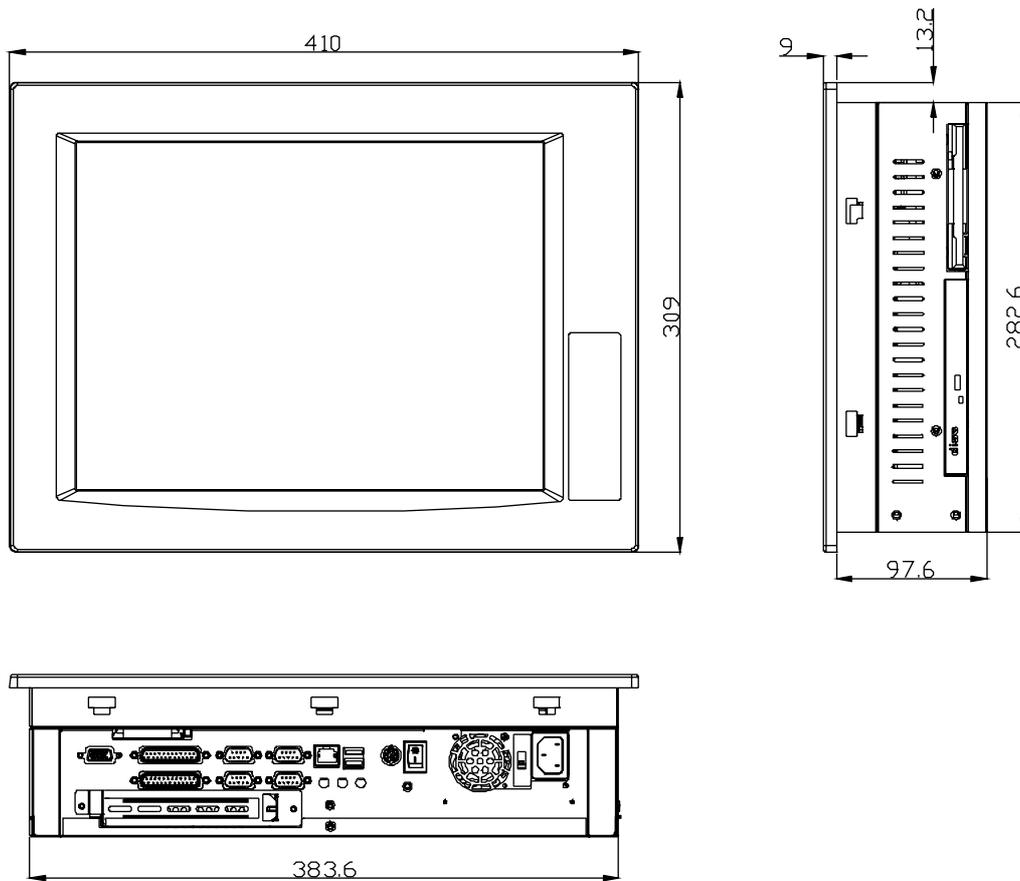
- **Creative Sound Blaster 16 compatible and Roland MPU401 UART Mode compatible**
- **Four high speed Serial ports** : three RS-232C, one RS-232C, or RS-422/485 Port
- **Parallel Ports** : Two SPP/EPP/ECP Parallel Ports
- **Enhanced IDE Interface** :
One 44-pin Header for 2.5" HDD
One 40-pin Header for 3.5" HDD
- **PCISA™ Bus Expansion to support ISA and PCI bus signal**
- **Isolated Digital I/O**: 4 Digital Inputs and 4 Digital Output channels
- **IrDA port: Support Serial Infrared (SIR) and Amplitude Shift Keyed IR (ASKIR) interface.**
- **Two USB ports: Support dual USB ports for future expansion.**
- **Watchdog timer**: Can be set by 1, 2, 10, 20, 110 or 220 seconds period. Reset or NMI is generated when CPU does not periodically trigger the timer.
- **E²Key™ Function**: A special designed 1Kbit EEPROM (non volatile memory) provided to accept read/ write data by customer's program. It is useful to store system ID, Password, Critical Data on the board.
- **Keyboard connector**
- **Mouse**: PS/2 Mouse Port on-board.
- **Power Consumption**: +5V/5.5A (AMD K6-2 350MHz, 384MB SDRAM)
+12V: 170mA , -12V : 60mA
- **Support ATX and AT power supply**
- **Operating Temperature**: 0° ~ 60° C (CPU needs Cooler)
- **Operating Humidity**: 5-95% non-condensing
- **Specifications of POS-370 CPU Board:**
The POS-370 socket 370 Celeron Pentium III® Processor Multimedia POS Control SBC provides the following specifications:
 - **CPU**: Celeron & Pentium III® Processor
 - **RAM**: 2x DIMM sockets up to 1GB SDRAM.

- **Bus:** PCI bus expansion to support .
- **Chipset:** SIS630, support 133MHz CPU clock
- **LCD/CRT Controller:** On chip SIS300
- **Support 3.3V or 5V flat panel.**
- **Support Mono, TFT, EL... wide one channel that panel.**
- **Optional One Channel or One Channel LVDS module.**
- **10/100Mbps Ethernet Controller:** On chip SIS900 LAN BASE-TX standard Dual Auto-sensing interface to 10MBps or 100MBps networks
RJ45 connector for 10BASE-T and 100BASE-TX
Full duplex capability, full software driver support.
- On CHIP AC97 SIS 7018
- **Four high speed Serial ports :** three RS-232C, one RS-232C, or RS-422/485 Port
- **Parallel Ports :** Two SPP/EPP/ECP Parallel Ports
- **Enhanced IDE Interface :** (DMA 66)
Two 40-pin Header for 3.5" HDD
- **PCI Bus Expansion to support PCI bus signal**
- **Isolated Digital I/O:** 4 Digital Inputs and 4 Digital Output channels
- **IrDA port: Support Serial Infrared (SIR) and Amplitude Shift Keyed IR (ASKIR) interface.**
- **Five USB ports: Support dual USB ports for future expansion.**
- **Watchdog timer:** Can be set by 1 min.(min.) period.
- **Keyboard connector**
- **Mouse:** PS/2 Mouse Port on-board.
- **Power Consumption:** +5V/6.5A (see POS-370 manual))
- **Support ATX and AT power supply**
- **Operating Temperature:** 0° ~ 60° C (CPU needs Cooler)
- **Operating Humidity:** 5-95% non-condensing

1.4 Mechanical Dimension

Front Panel: 410mm x 309mm x 9mm (WxHxD)

Cabinet: 383.6mm x 282.6mm x 97.6mm (WxHxD)

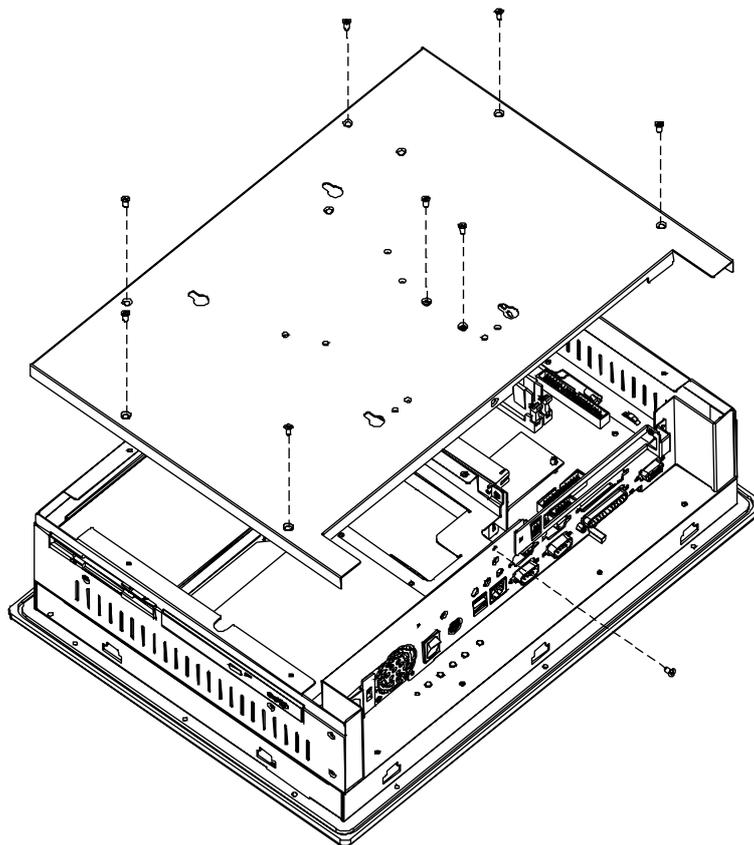


2. System Setup

The PPC-5050A, 15" LCD TFT Panel PC, is provided complete kit for your operation. The following sections of this chapter will help your installation and maintenance.

2.1 The Reverse Side of PPC-5050A

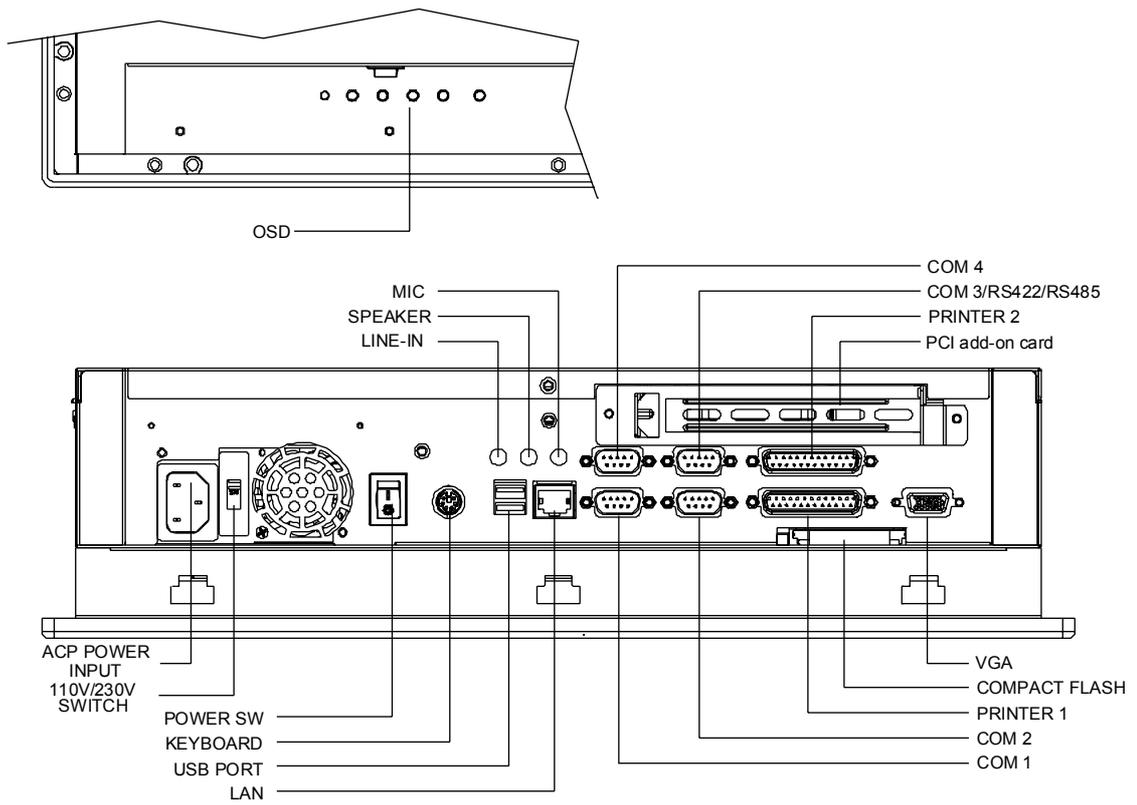
The below diagram shows the reverse side of PPC-5050A. For maintenance, installation or upgrade, you have to remove the back cover first by unfastening 9 screws as the diagram shown.



Warning: Before any installation/un-installation, please notice any effects of static electricity.

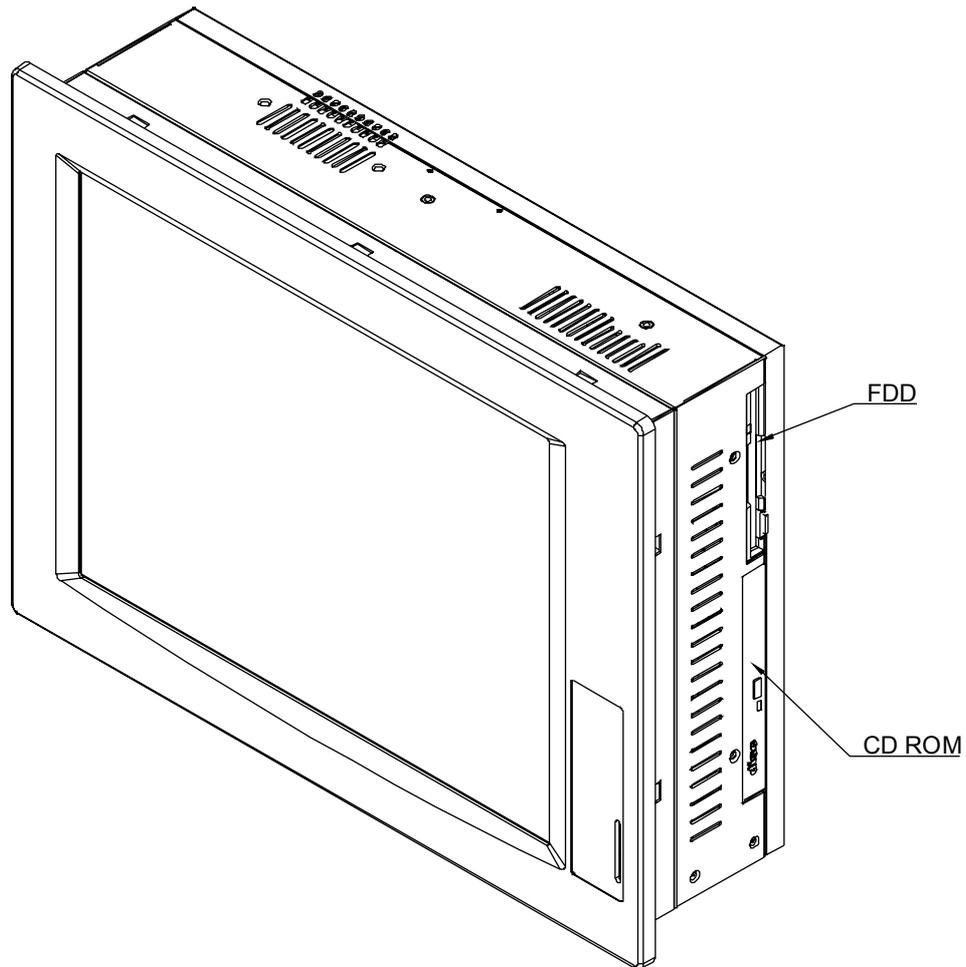
2.2 The Reverse Side of the Rear Cabinet

The below figure indicates the reverse side of the rear cabinet.



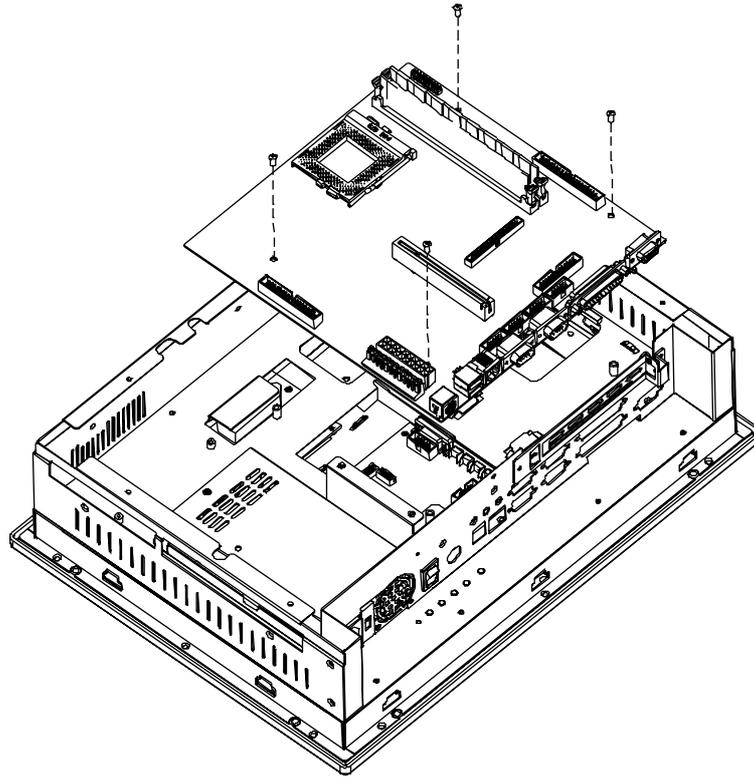
2.3 The Side View of PPC-5050A

One FDD and CD-ROM are accessible for your operation on the driver frame.



2.4 POS-566/370 CPU Board Installation

To install the POS-566/370 CPU Board, you have to place the board into the cabinet and then fasten it by four screws.

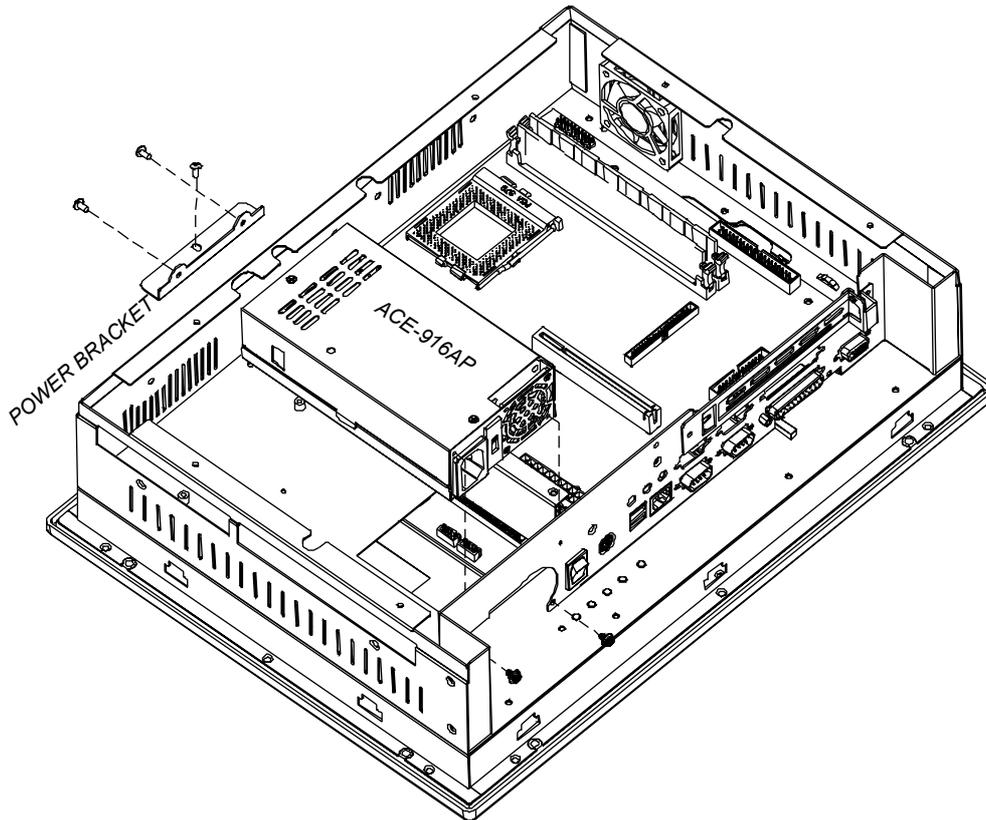


2.5 Power Supply Installation

The standard Power Supply for PPC-5050A is ACE-916AP, which has to be fastened to the power bracket by 2 screws, and to be installed in the cabinet by fastening 3 screws as below diagram shown.

Output Spec. at 50°C

Model	Input Voltage	Max Output		
		+5V	+12V	-12V
ACE-916AP	90V to 264VAC	16A	6A	0.3A

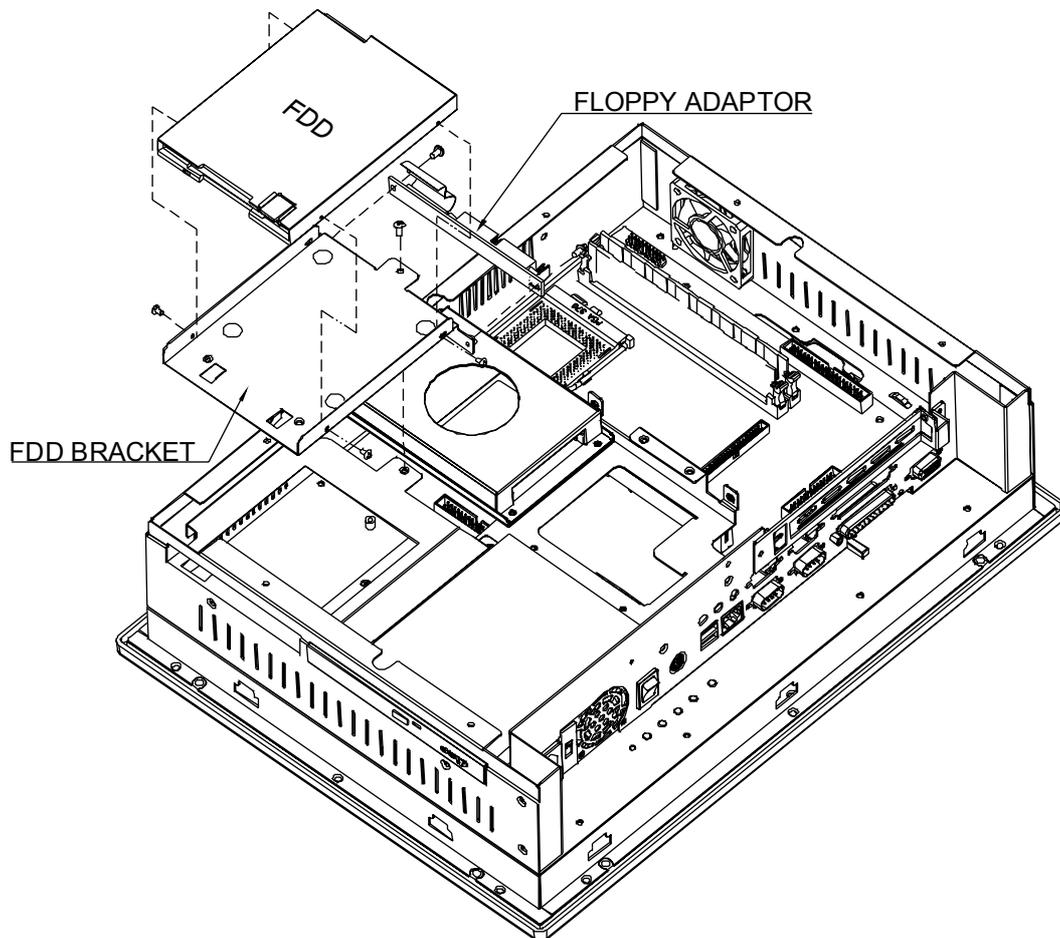


2.6 Drive Disk Installation

Following sections will introduce you how to install HDD, FDD and CD-ROM. For the HDD, FDD and CD-ROM are installed in the cabinet, thus you have to open the back cover first if you want to install , upgrade or replace them.

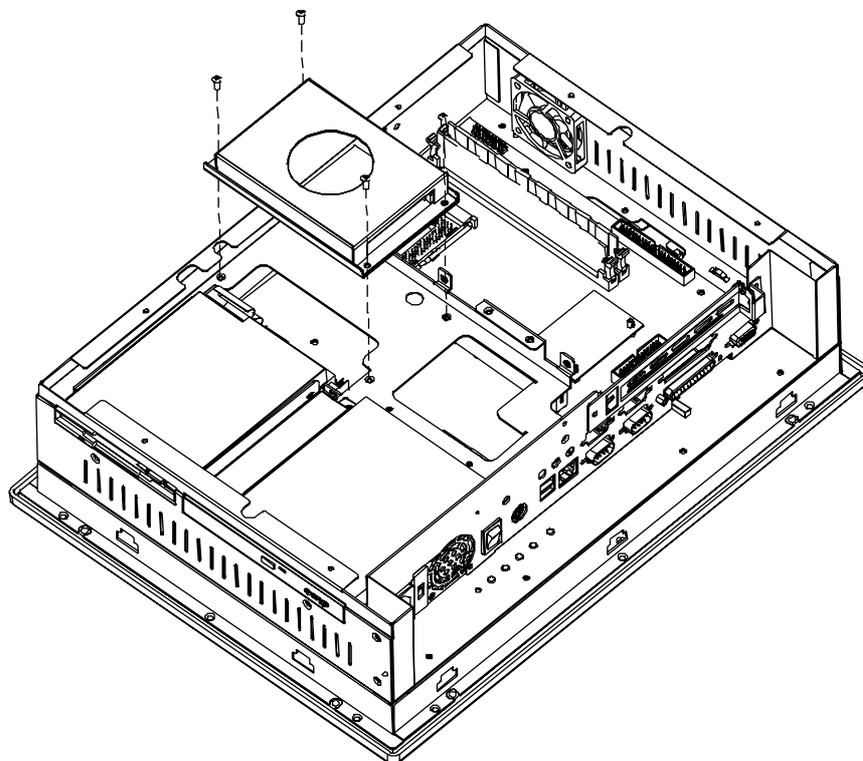
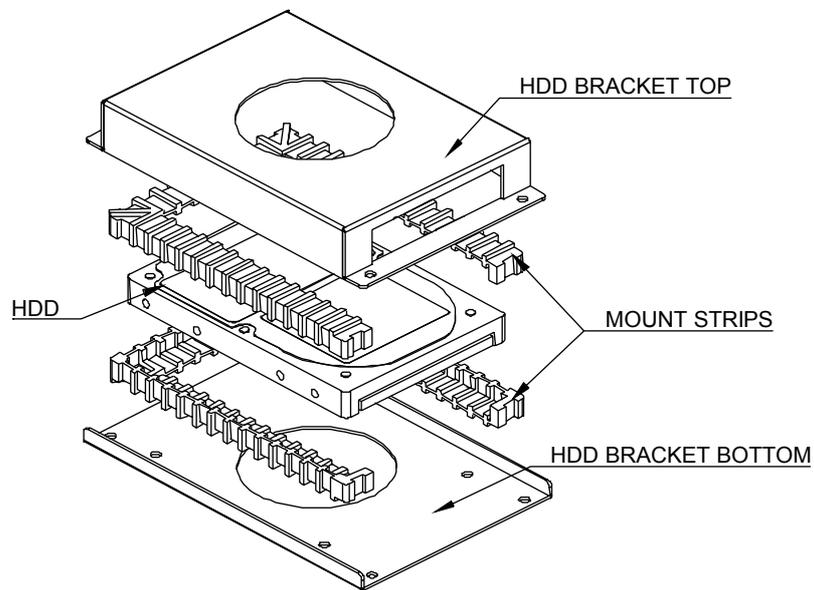
2.6.1 FDD Installation

It's very easy to install the FDD. First, fasten the FDD to the Floppy Chassis by 4 screws, then fasten it with the Floppy Adaptor to the drives shelf by 2 screws.



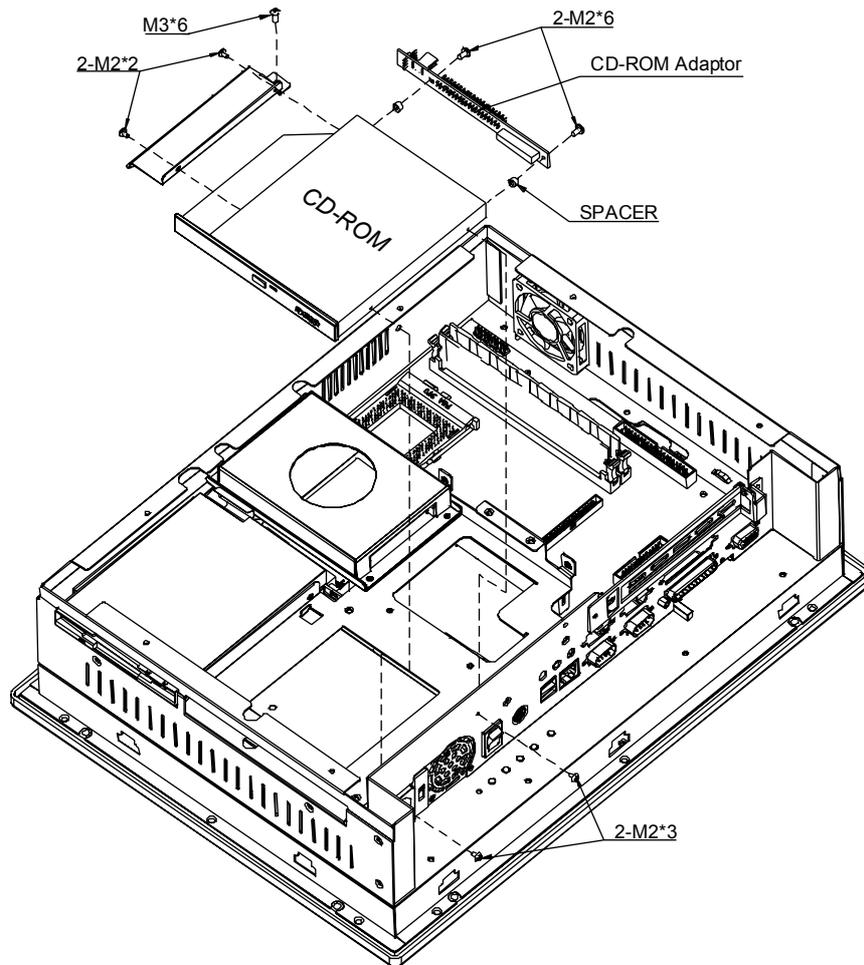
2.6.2 HDD Installation

To install the HDD, you have to assemble the HDD to the HDD bracket first. Then, fasten the HDD bracket to the drives shelf by 4 screws.



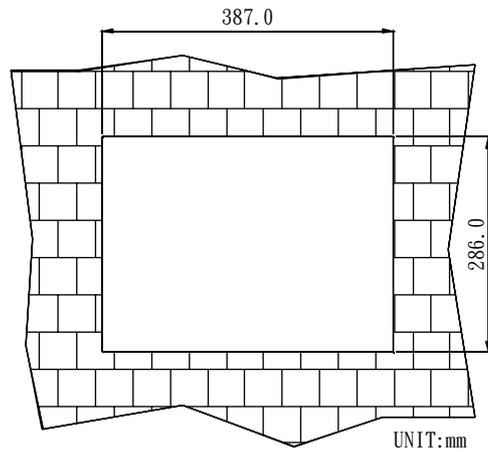
2.6.3 CD-ROM Installation

To install CD-ROM. You have to assemble the CD-ROM into the bracket, then fasten the CD-ROM Adaptor to the CD-ROM. Finally you have to fasten this unit to the drives shelf.

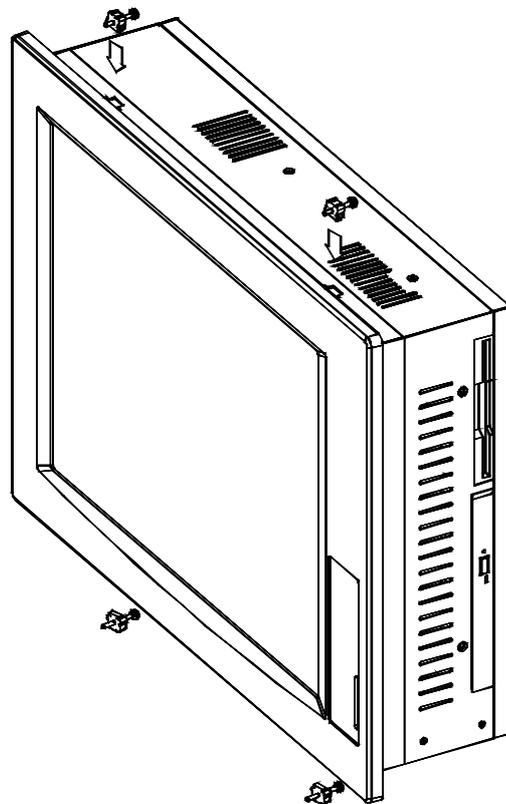


2.7 Panel Mounting

PPC-5050A is designed for panel mounting. Before mounting the PPC-5050A into panel, you have to check the cut out dimension first. Then mount it into panel by four supporters. Please refer to diagrams below.

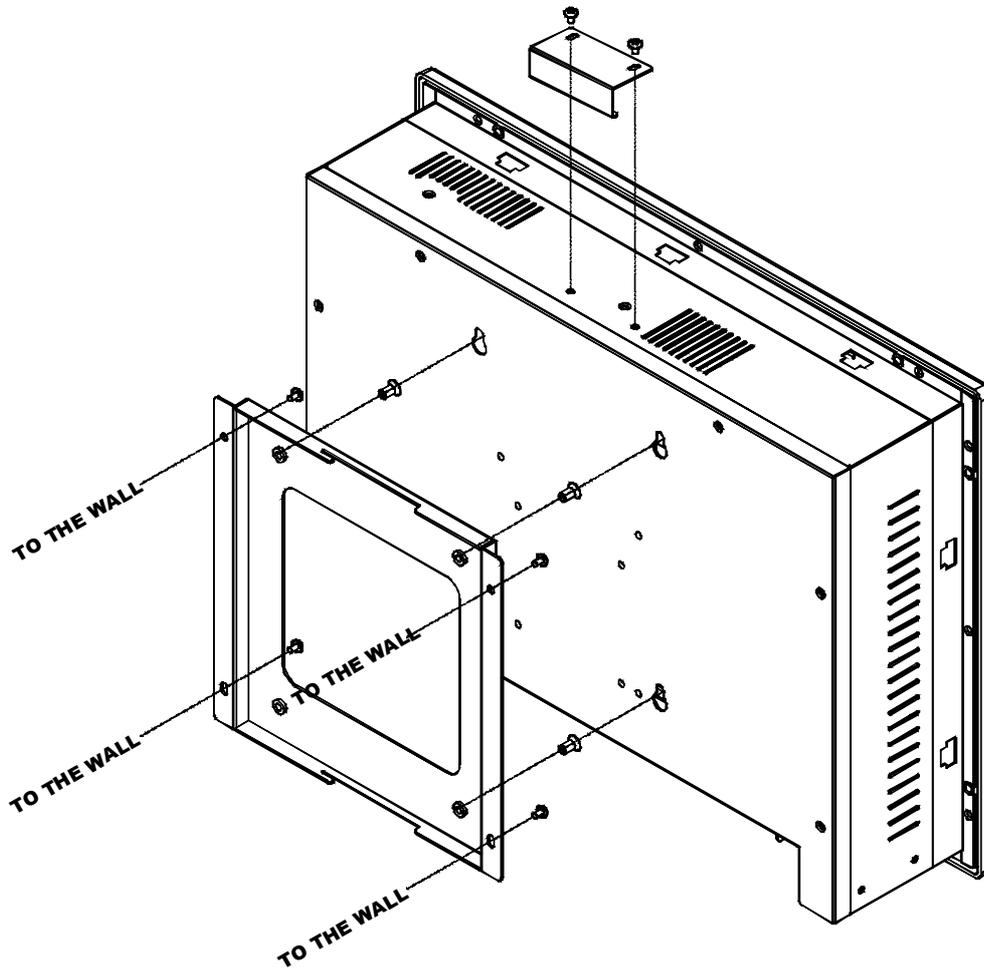


THE DIMENSION IS FOR PANEL MOUNTING
(The flat panel thickness is 6mm or less than 6mm)



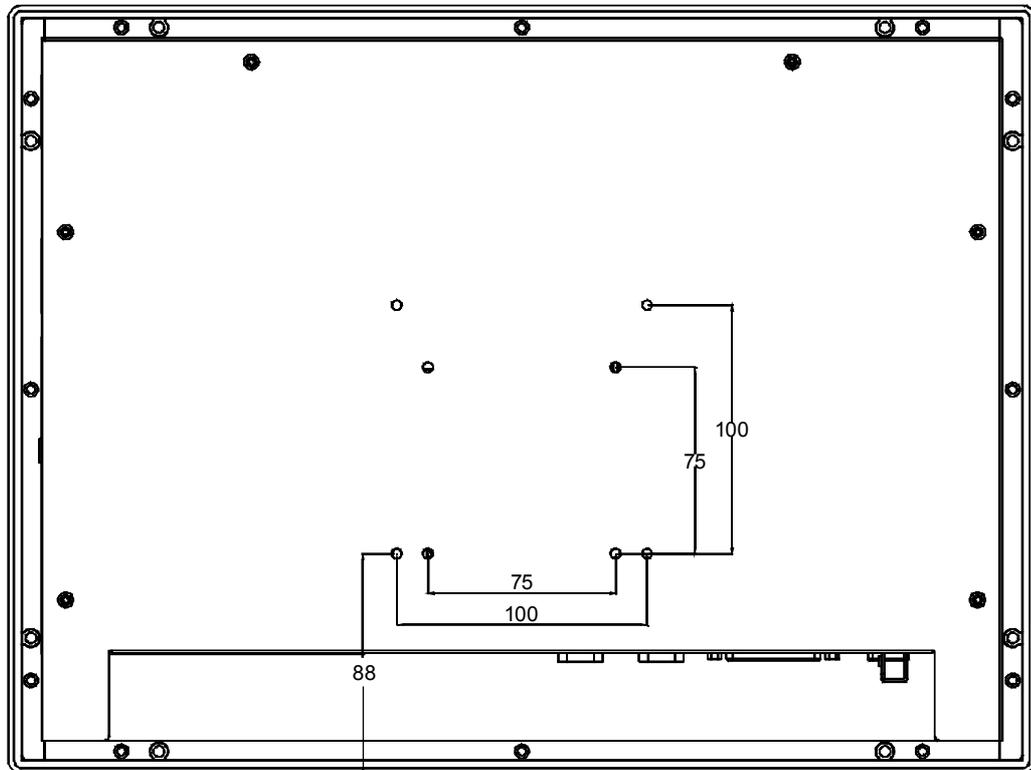
2.8 Wall Mounting

PPC-5050A is suitable for Wall mount.



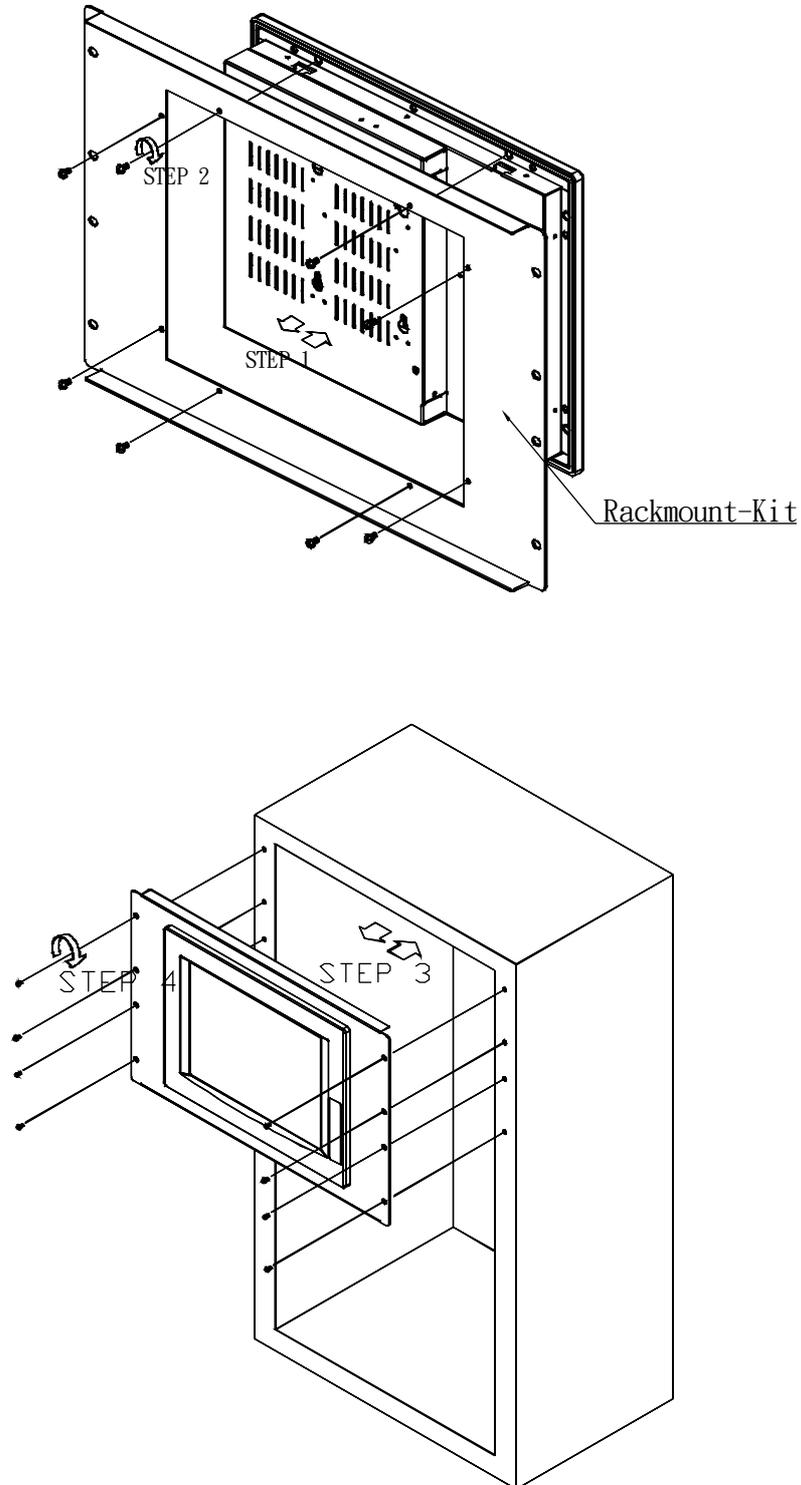
2.9 Arm Mounting

PPC-5050A is not only suitable for panel mounting but also for 75/100mm interface pads for arm mounting; and the specification conform to the proposed VESA standard.

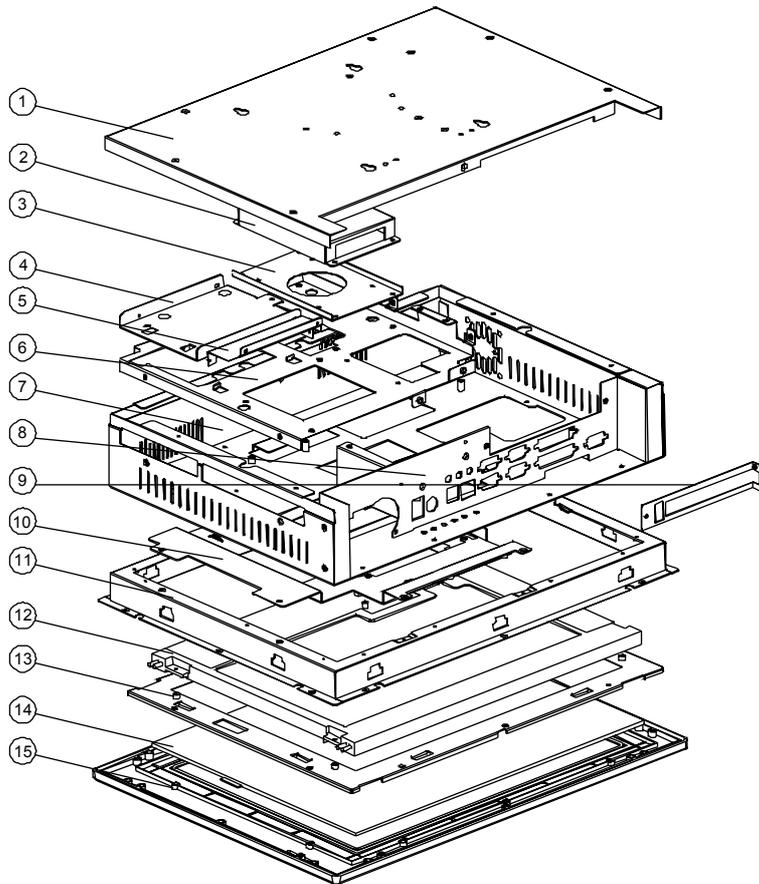


2.10 Rack Mounting

DM/SRM/PPC serial product provide option rackmount kit for industrial Rack. The following diagram shows how to mount DM/SRM serial product onto the 19" Rack.



Appendix A Exploded Diagram



ITEM	DESCRIPTION	Q'TY
1	BACK COVER	1
2	HDD BRACKET (TOP)	1
3	HDD BRACKET (BOTTOM)	1
4	FDD BRACKET	1
5	CDROM BRACKET	1
6	DRIVES SHELF	1
7	REAR BRACKET	1
8	REAR BRACKET	1
9	REAR CARD FRAME	1
10	VGA BRACKET	1
11	FRONT BRACKET	1
12	15" TFT LCD	1
13	TOUCH PANEL HOLDER	1
14	TOUCH PANEL	1
15	FRONT PANEL	1

Appendix B User Mode OSD Feature

Description

- **Auto-Adjustment**

This feature will automatically adjust the H/V position, frequency, phase, and black level.

- **Auto Phase**

This feature will automatically adjust the sampling.

- **Brightness**

This option is used to adjust the brightness of screen. This function will adjust the offset value of ADC. Setting this value too high or too low will decrease the quality of image.



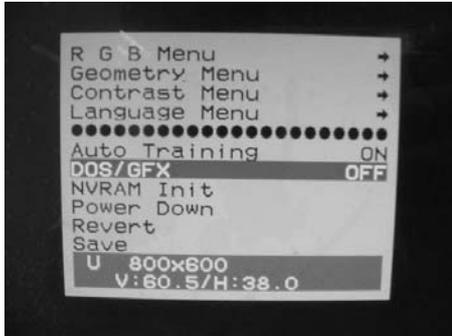
- **Contrast**

This option is used to adjust the contrast level on the screen, and will adjust the gain value of ADC. Adjusting this value too high or too low will decrease the quality of image.



- **DOS/GFX**

This option is used to select VGA input signal in either text or graphic mode. (This option is only available on resolution of 720/640x400 or 720/640x350). 400 and 350 standard IBM modes have the same Hsync. and Vsync. values, and AV-9261 MPU can not differentiate between them automatically, so the user should adjust them manually to match the proper VGA mode .



- **H. Position**

This option is used to adjust horizontal display position of image.

- **V. Position**

This option is used to adjust vertical display position of image.

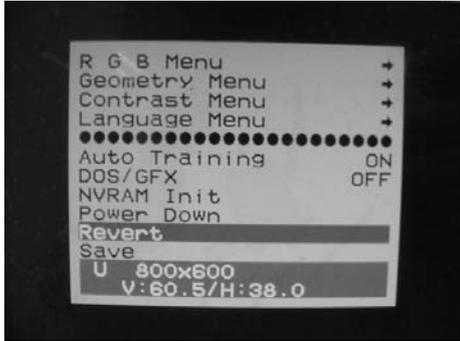
- **Language**

This option is used to select the language used on the OSD display. AV-9261 can support 2 languages on the OSD display. English is the default language.



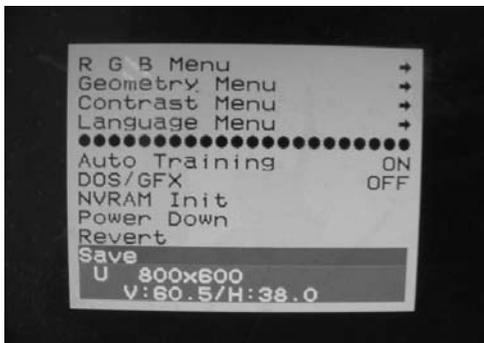
- **Revert**

This option is used to reset the original parameters to the factory's OSD data area of the system EEPROM 24c16 device in order to re-initialize the AV-9261 system. When a user over-adjusts the OSD data and sees no improvement in the quality, then the user can select this feature and MPU will reload default BIOS setting and re-initialize the system.



- **Save**

This option is used to save the parameters into the EEPROM 24c16 system's user OSD adjustment data area and close the OSD. Whenever the user adjusts any parameters, this option will save the changed data on to the EEPROM so that the MPU will use the stored data to initialize the AV-9261 system on future re-boots.



- **Main Menu**

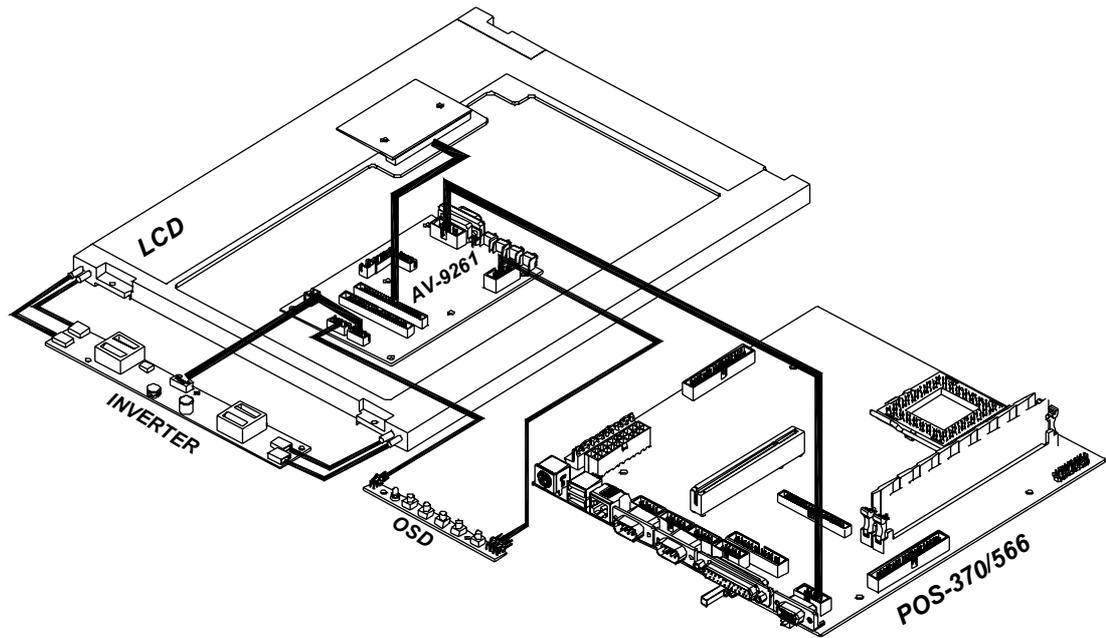
Each level of the OSD has an item named **Main Menu**, which allows the user to exit the current level and return to the main menu.

- **Exit**

Press the **EXIT** key to exit the OSD menu when you are finished.

Appendix C Display Interface

For POS-370/566



Appendix D Touch Panel Controller

The optional touch screen provides RS232 interface and the controller of eGalax are as the below figure shown.

