

PPC-5150 Series

15" TFT Panel PC

Version 1.0

User Manual

Version 1.0

July 28, 2003



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Revision History

Revision	Revision Note	Date
1.00	Initial release of user manual	July 28, 2003

Note:

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

Table of Contents

CHAPTER 1	INTRODUCTION	4
1.1	CHECKLIST	4
1.2	FEATURES	5
1.3	SPECIFICATIONS	5
1.4	MECHANICAL DIMENSION	8
CHAPTER 2	SYSTEM SETUP.....	10
2.1	THE REVERSE SIDE OF PPC-5150 SERIES.....	10
2.2	THE REAR VIEW OF THE CABINET BEING UPSIDE DOWN	11
2.3	THE SIDE VIEW OF PPC-5150 SERIES.....	12
2.4	POS-478 CPU BOARD INSTALLATION	13
2.5	POWER SUPPLY INSTALLATION.....	14
2.6	DRIVE DISK INSTALLATION.....	15
2.6.1	<i>FDD Installation.....</i>	<i>15</i>
2.6.2	<i>HDD Installation.....</i>	<i>16</i>
2.6.3	<i>CD-ROM Installation.....</i>	<i>17</i>
2.7	PANEL MOUNTING.....	18
2.8	WALL MOUNTING.....	19
2.9	ARM MOUNTING.....	20
2.10	RACK MOUNTING.....	21
APPENDIX A	EXPLODED DIAGRAM OF PPC-5150 WITH ALUMINUM FRONT PANEL.....	22
APPENDIX B	EXPLODED DIAGRAM OF PPC-5150 WITH PLASTIC FRONT PANEL	23
APPENDIX C	USER MODE OSD & BRIGHTNESS FEATURE DESCRIPTION	24
APPENDIX D	DISPLAY INTERFACE	27
APPENDIX E	TOUCH PANEL CONTROLLER.....	28

Chapter 1 Introduction

The PPC-5150 series, a 15" LCD TFT Panel PC, takes advantages of modern flat-panel display technology. It consists of a POS-478 CPU board, drive spaces and a power supply for the minimum size. The PPC-5150 is an IBM PC/AT compatible computer specially designed to meet the applications for an industrial environment.

1.1 Checklist

Item	Description	Quantity
1	User Manual	1
2	Power Cable	1
3	Wall Mounting Kit	1
4	SLIM CD-ROM Accessories (19B00-000012)	1
5	SLIM FLOPPY Accessories (19B00-000013)	1
6	Screw Accessories (19600-000078)	1
7	JUMPER Pitch: 2.0	10
9	POS-478 User Manual	1
10	CD (System Driver)	1
11	Touch Panel Pen (Optional)	1
12	Touch Panel Driver (Optional)	1



1.2 Features

CPU Board

PPC-5150 series is designed for POS-478 CPU board. The POS-478 board is a POS form factor board, which is equipped with a high performance processor, an advanced multi-mode I/O, designed for the system manufacturers, integrators, or VARs to provide all the performance, reliability, and quality.

LCD Display

The PPC-5150 series is equipped with a 15" TFT LCD.

Power Supply

The standard industrial power supply of PPC-5150 series is UPF200-AA.

Touch Screen (optional)

Dynapro resistive touch screen (T-R151B).

Micro Touch capacitive touch screen (T-C151)

Note: Plastic front panel doesn't support Micro Touch capacitive touch screen

HDD, FDD & CD-ROM

Two 2.5" internal HDD, one slim FDD, and one slim CD-ROM are available.

1.3 Specifications

- **Disk Drive Bay:**
 - ✓ Supports two 2.5" HDDs, one slim FDD, and one slim CD-ROM.
 - ✓ Best solution for panel-mount human machine interface.
- **Dimensions :**
 - ✓ Aluminum Front Panel: 410mm x 309mm x 8 (WxHxD)
 - ✓ Cabinet: 383.6mm x 282.6mm x 99.9mm (WxHxD)
 - ✓ Plastic Front Panel: 410mm x 309mm x 9 (WxHxD)
 - ✓ Cabinet: 383.6mm x 282.6mm x 97.6mm (WxHxD)

- **LCD Display:**

TTL LCD connector interface supports the 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 T-R151B (optional)**

- ✓ Type: Analog Resistive
- ✓ Resolution: Continuous
- ✓ Light Transmission: Typical value 75%
- ✓ Surface Hardness: 4H (Test condition: ASTM D3363-92A)
- ✓ 8-wire Touch Screen Sensor
- ✓ Touch Screen Interface: RS-232
- ✓ Support Operating Systems: Linux,MS-DOS,Windows 3.1/95/
98/CE, ME/2000/NT/XP,OS/2,MAC,etc.

- **Micro Touch Screen T-C151 (optional)**

- ✓ Type: Capacitive
- ✓ Light Transmission: Typical value 83 ±3%
- ✓ Surface Hardness: 2H or more
- ✓ Touch Screen Interface: RS-232
- ✓ Operation Voltage: DC 5V±10%
- ✓ Operating Temperature : 0 ~ 55
- ✓ Storage Temperature : -40 ~ 85
- ✓ Relative Humidity: 0 to 95%
- ✓ Support Operating System: Linux, MS-DOS, Windows 3.1/95/
98, ME/2000/NT/XP, OS/2, MAC, etc.

- **Environmental Specifications**

- ✓ Operating Temperature : 0 ~ 40
- ✓ Relative Humidity: 5~85% @40 , non-condensing
- ✓ Vibration: 5 to 17 Hz, 0.1"double-amplitude displacement,
17 to 640 Hz, 1.5 G peak to peak.

- **Industrial Power Supply: UPF200-AA series Power Supply**

- ✓ High reliability triple outputs switching Power Supply with height 40.6mm only
- ✓ Standard Power Supply: UPF200-AA 200W ATX With PFC function
- ✓ Voltage: AC 90V~264V
- ✓ Current: 4A typ. (AC IN 110V), 2A typ. (AC IN 220V)
- ✓ Frequency: 50/60 Hz (47~63Hz)
- ✓ Efficiency (%): 70% Typical, at full Load
- ✓ 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 11ms once on each X, Y, and Z axis
- ✓ Safety: meet UL1950/TUV: EN60950,CE
- ✓ EMI: meet FCC class B /CISPR:EN 55022 class B/CE: Harmonic EN61000-3-2

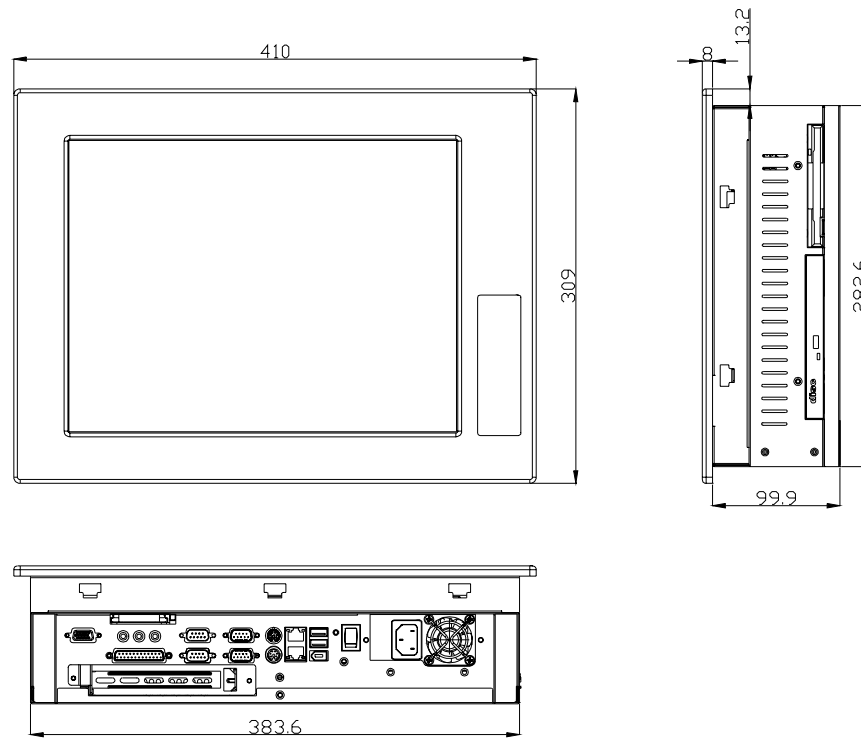
Model	Input Voltage	Max Output					
		+5V	+12V	+3.3V	-5V	-12	5VSB
UPF200-AA	AC90V ~ 264V	21A	10A	14A	0.3A	0.8A	2A

NOTE: +3.3V and +5V Combined Power 110W MAX

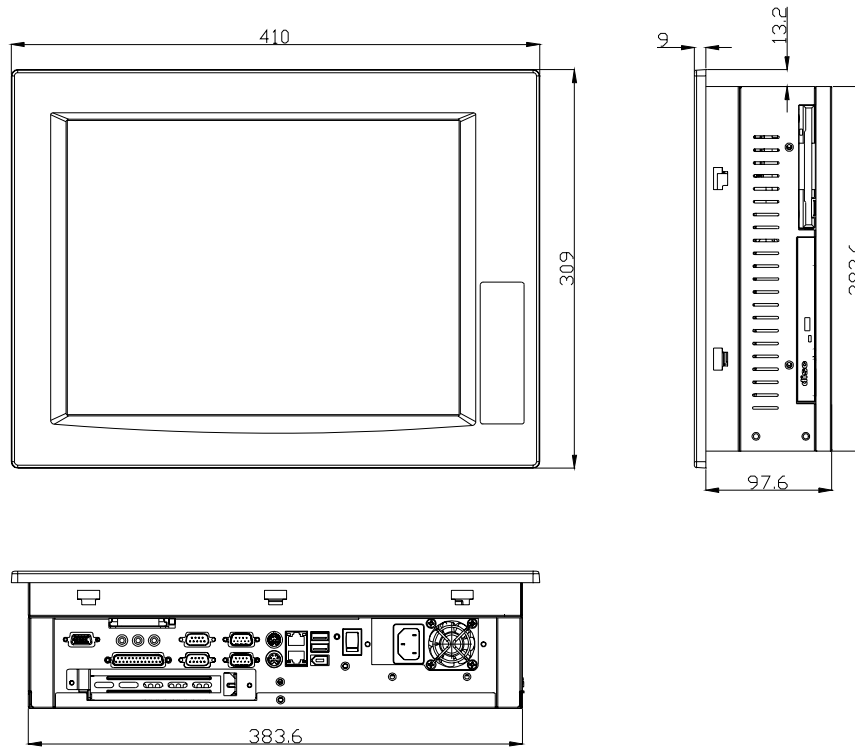
+3.3V +5V and +12V Combined Power 180W MAX

1.4 Mechanical Dimension

- Aluminum Front Panel : 410mm x 309mm x 8mm (W x H x D)
Cabinet : 383.6mm x 282.6mm x 99.9mm (W x H x D)



- Plastic Front Panel : 410mm x 309mm x 9mm (W x H x D)
Cabinet : 383.6mm x 282.6mm x 97.6mm (W x H x D)

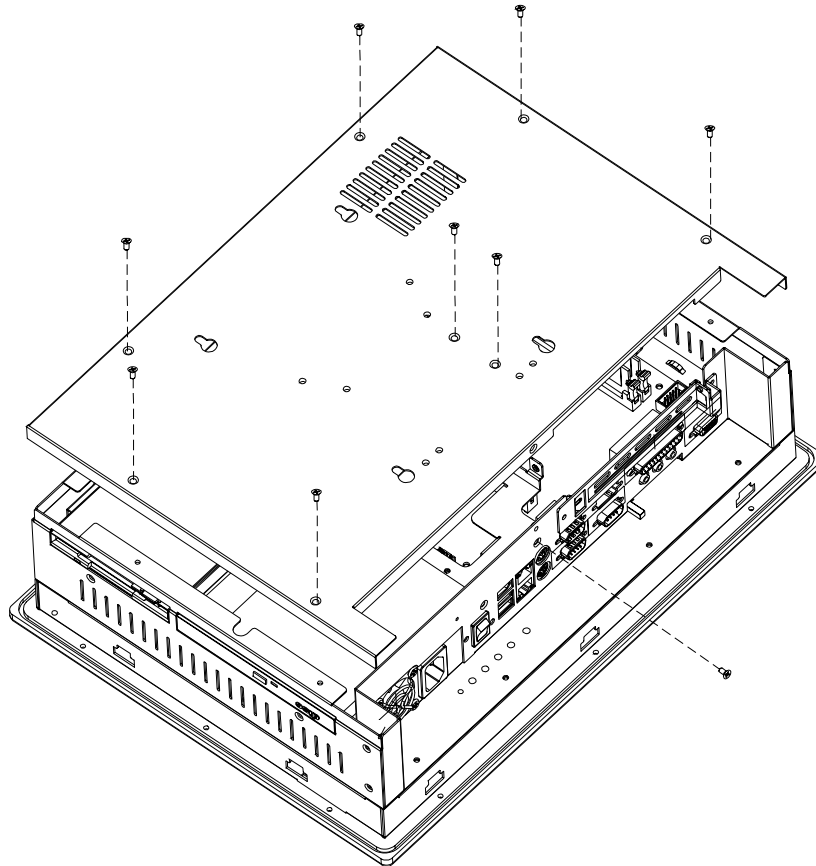


Chapter 2 System Setup

The PPC-5150 series, 15" LCD TFT Panel PC, provides complete kit for your operation. The following sections of this chapter demonstrate how to install the components and do the maintenance.

2.1 The Reverse Side of PPC-5150 Series

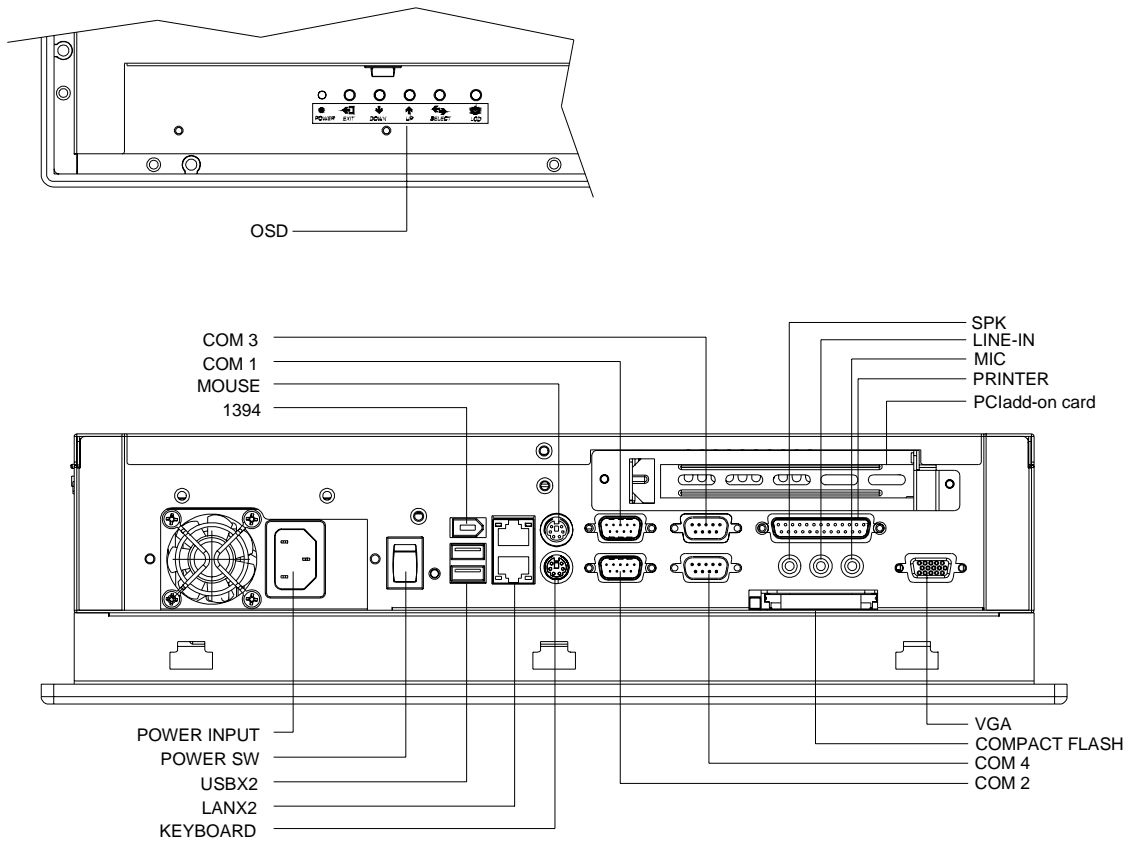
The following diagram shows the reverse side of PPC-5150 series for maintenance, installation or upgrade. Please remove the back cover first by loosening 9 screws as shown below:



Warning: Before any installation/un-installation, please pay attention to any effects of static electricity.

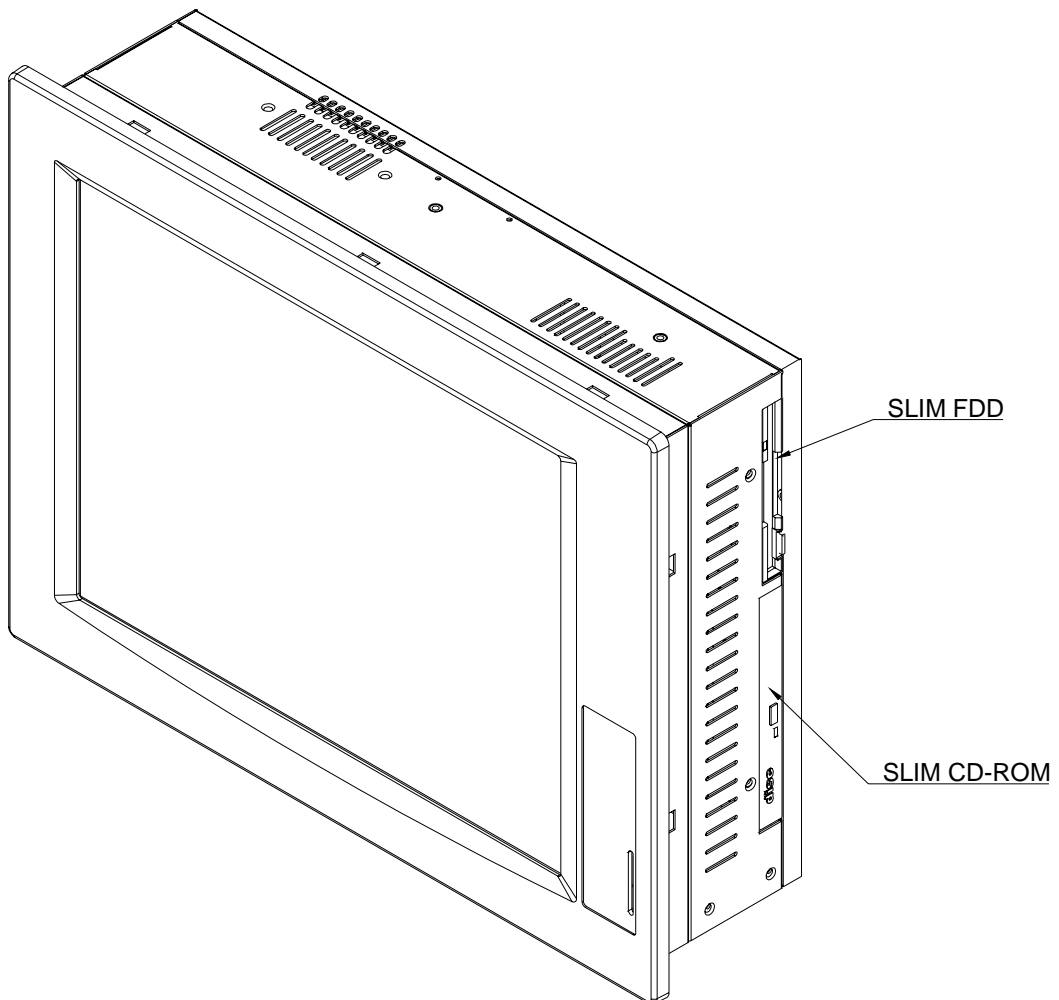
2.2 The Rear View of the Cabinet being Upside Down

The following drawing indicates the rear view of the cabinet with upside down.



2.3 The Side View of PPC-5150 Series

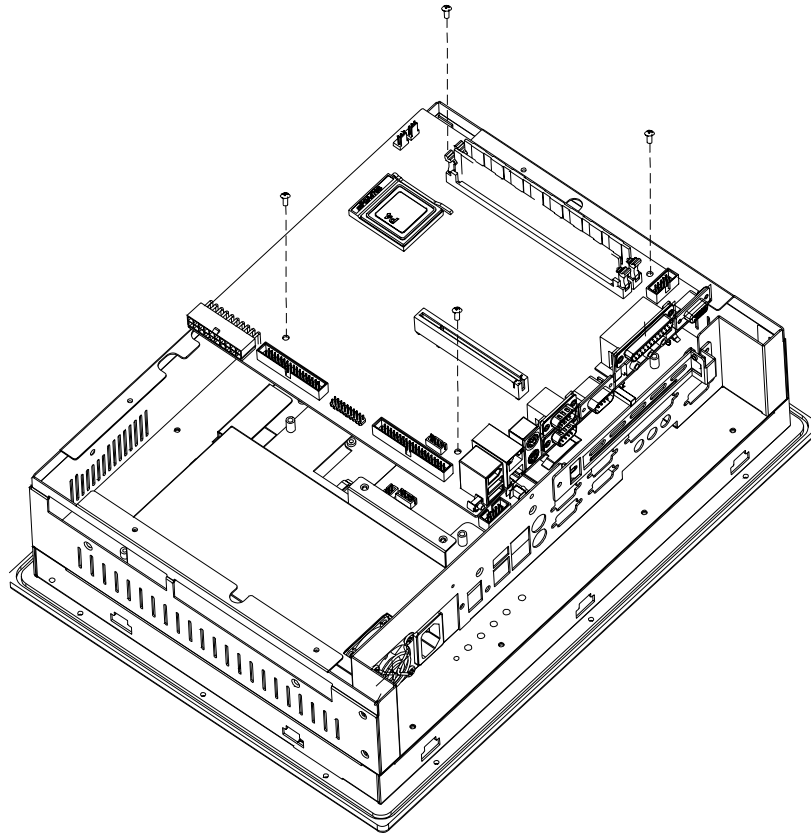
One slim FDD and one slim CD-ROM are accessible on the side.



2.4 POS-478 CPU Board Installation

Step1. Place the board into the cabinet.

Step2. Hold it down by four screws as the diagram shown below.

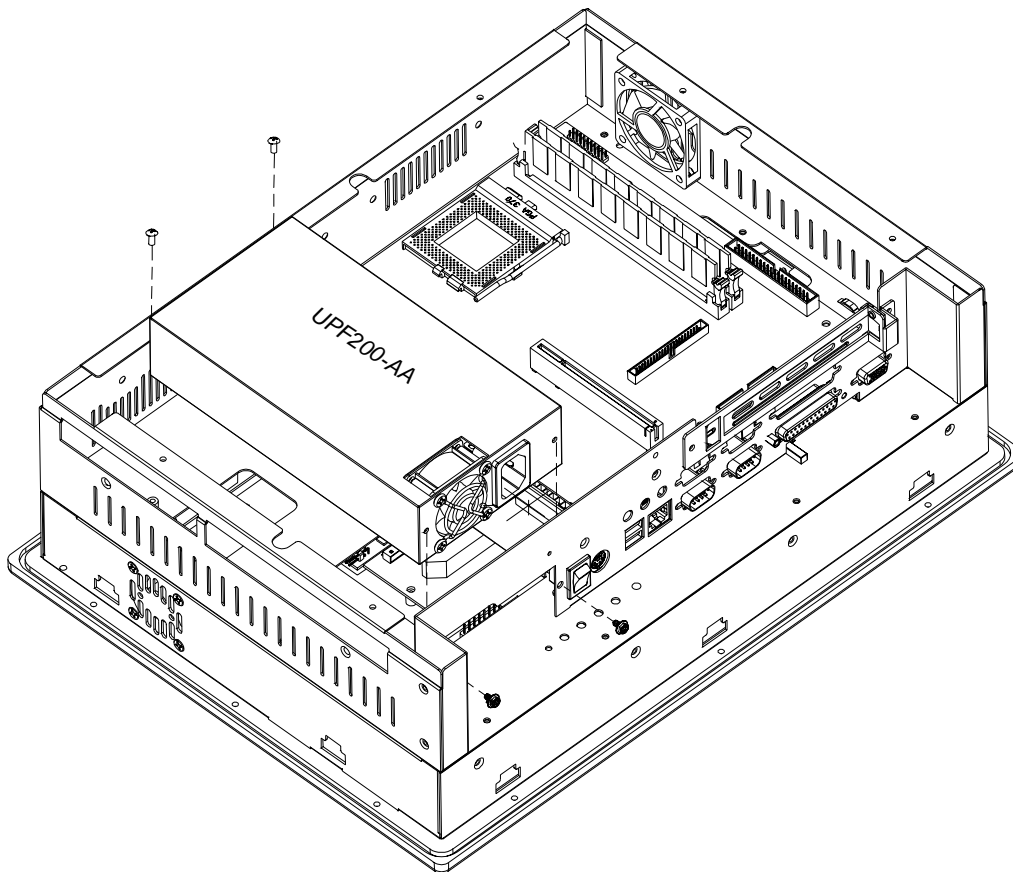


2.5 Power Supply Installation

The standard Power Supply for PPC-5150 series is UPF200-AA.

Step1. Fasten it to the power bracket by 2 screws.

Step2. Fasten it down to the cabinet with 2 screws as shown below.



Output Specifications at 50°C

Model	Input Voltage	Max Output					
		+5V	+12V	+3.3V	-5V	-12	5VSB
UPF200-AA	AC90V ~ 264V	21A	10A	14A	0.3A	0.8A	2A

NOTE: +3.3V and +5V Combined Power 110W MAX

+3.3V +5V and +12V Combined Power 180W MAX

2.6 Drive Disk Installation

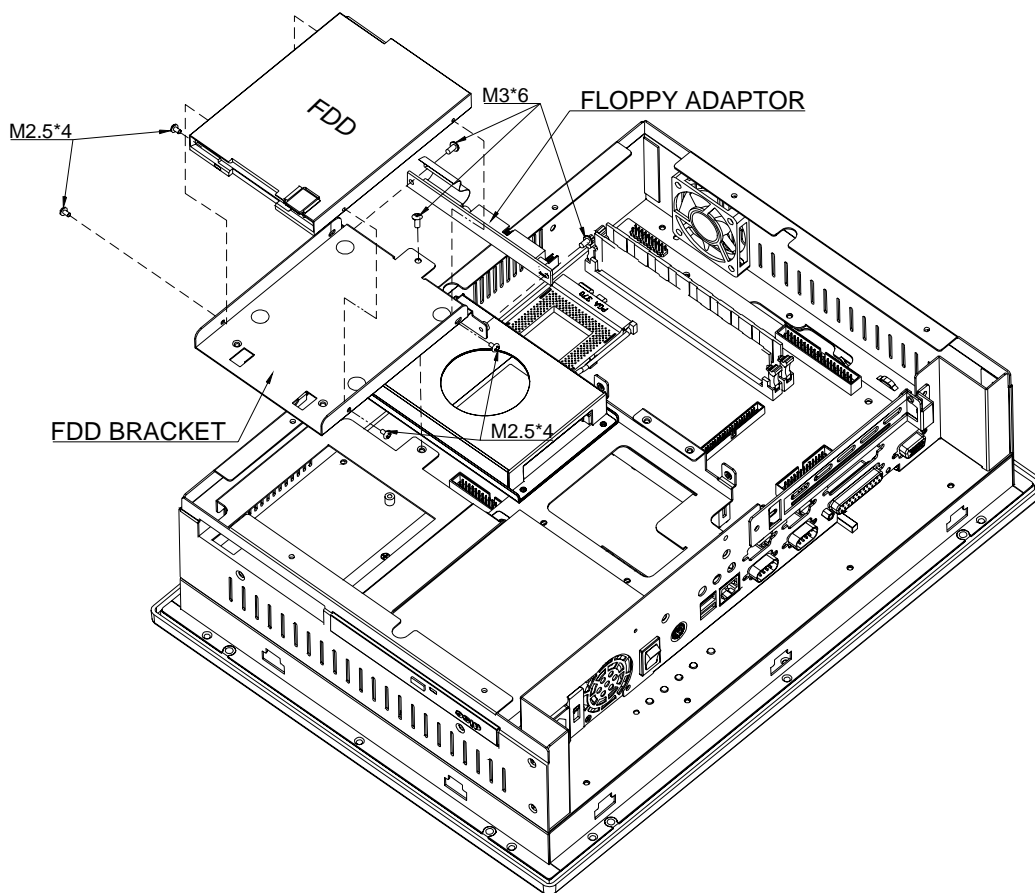
The following sections will show how to install HDD, FDD and CD-ROM.

Since the HDD, FDD and CD-ROM should be installed in the cabinet, please remove the back cover before installation, upgrade or replacement.

2.6.1 FDD Installation

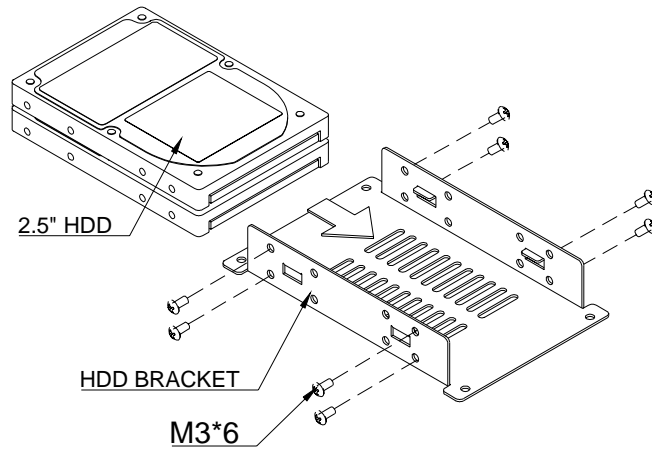
Step1. Fasten the FDD to the Floppy Chassis by 4 screws.

Step2. Fasten it with the Floppy Adaptor to the drives shelf by 2 screws.

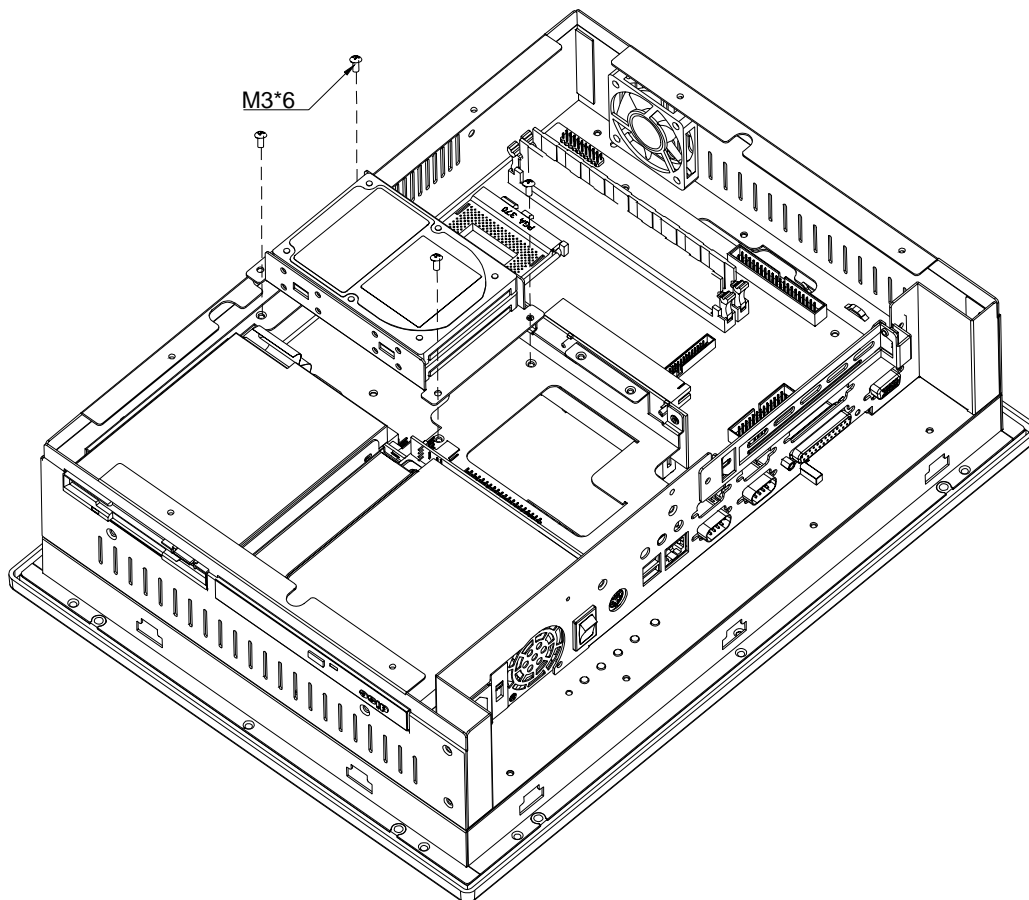


2.6.2 HDD Installation

Step1. Slide the HDDs into the HDD brackets first, and then fasten them with screws as the diagram shown below.

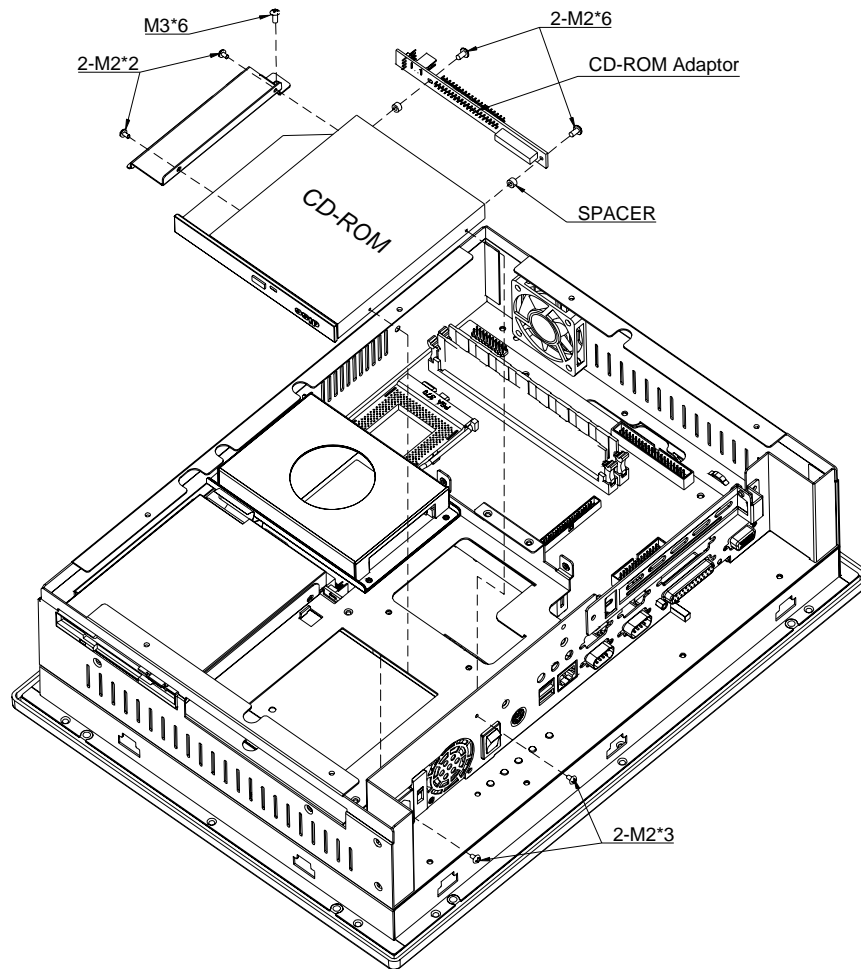


Step2. Place the whole modules into the cabinet, and fasten them with screws shown in the diagram.



2.6.3 CD-ROM Installation

- Step1. Assemble the CD-ROM into the bracket
- Step2. Fasten the CD-ROM Adaptor to the CD-ROM
- Step3. Fasten this unit to the drive shelf.

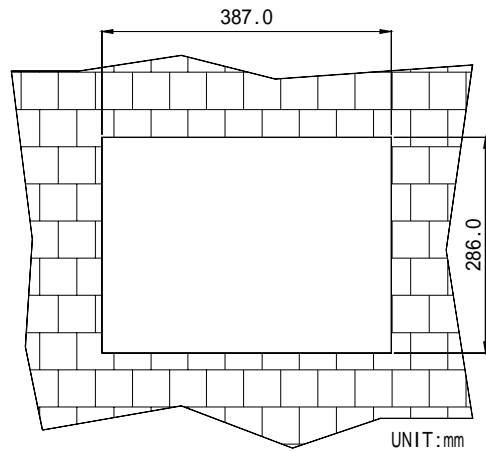


2.7 Panel Mounting

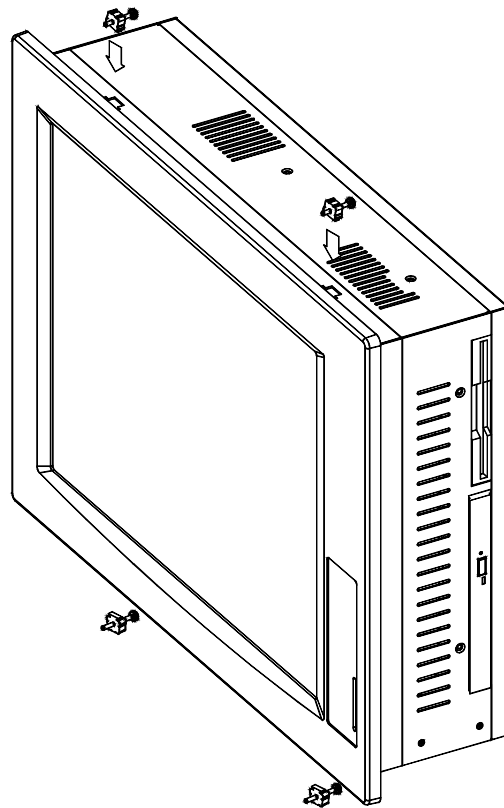
PPC-5150 series is designed for panel mounting.

Step1. Check the cut out dimension first.

Step2. Mount it into the panel by four supporters. Please refer to the diagrams below.

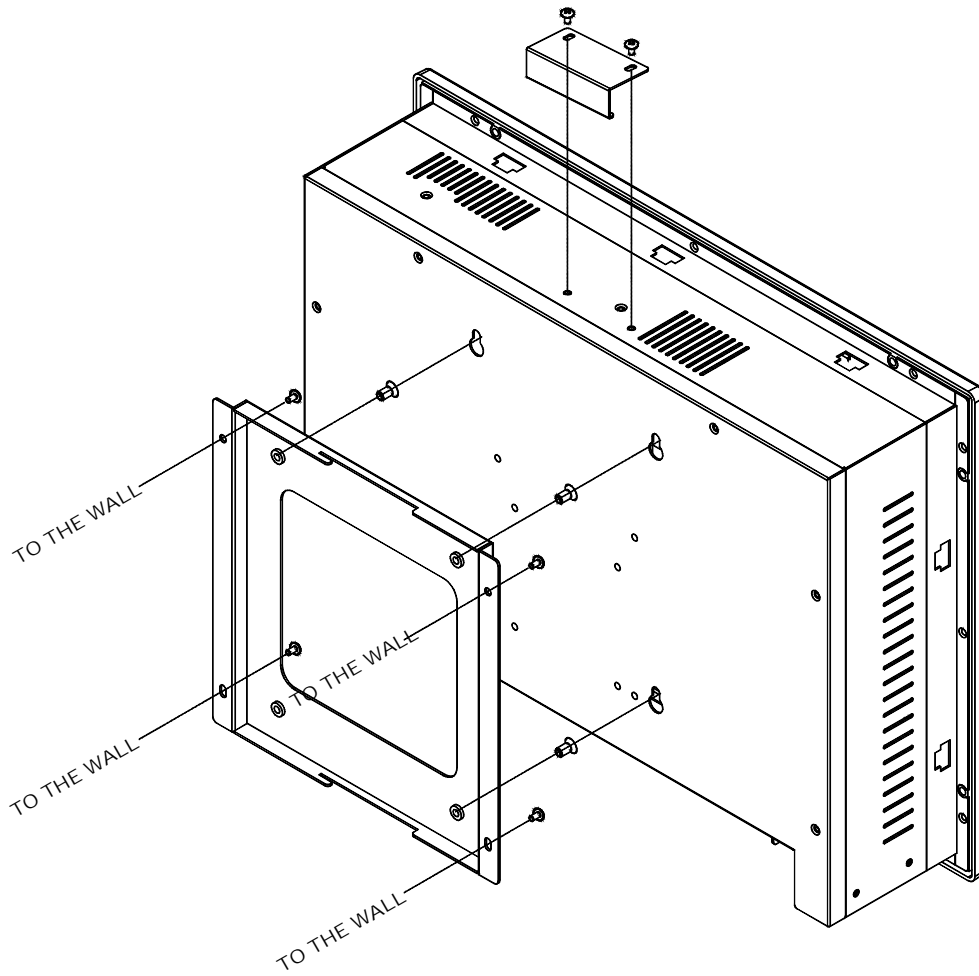


THE DIMENSION IS FOR PANEL MOUNTING
(The flat panel thickness is 6mm or less than 6mm)



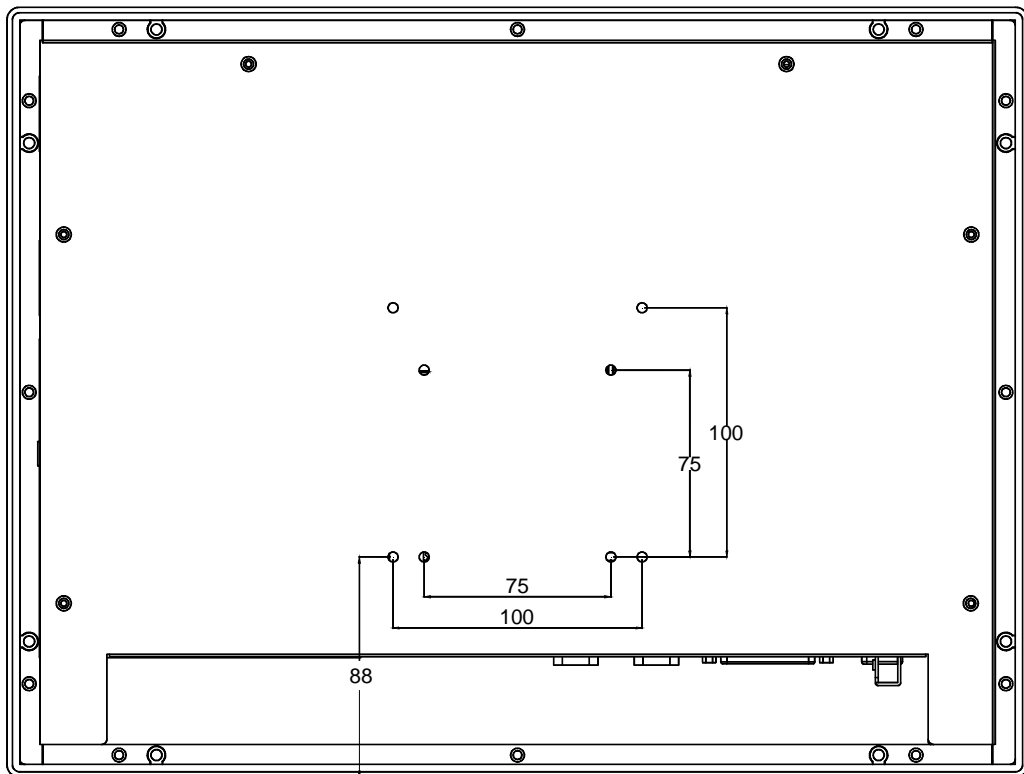
2.8 Wall Mounting

PPC-5150 series is suitable for Wall mount.



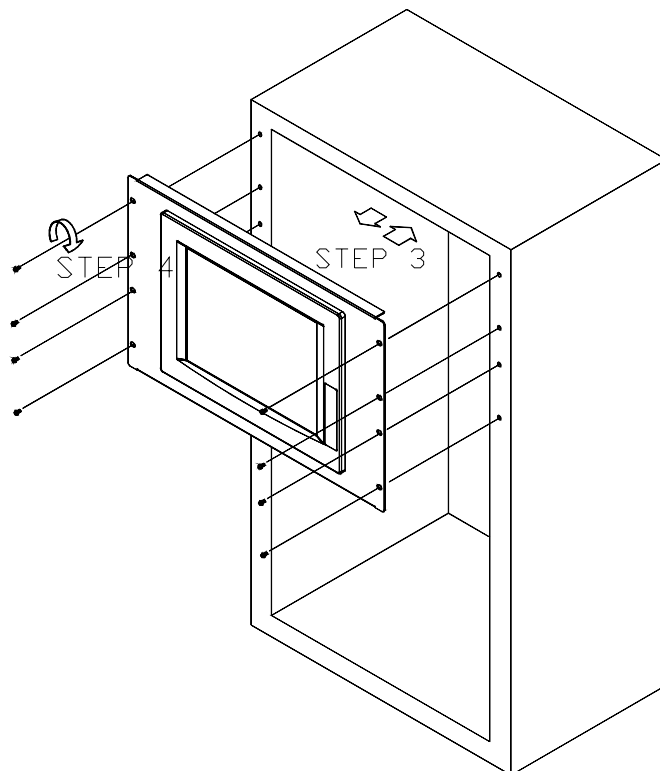
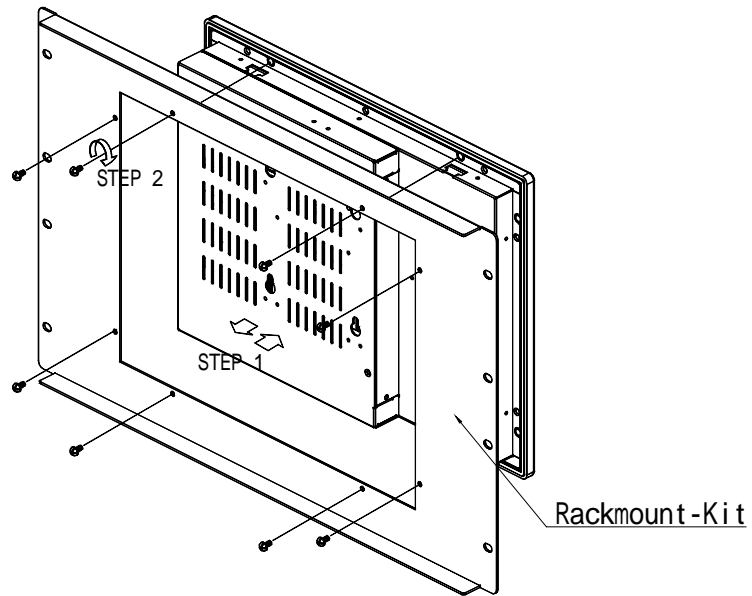
2.9 Arm Mounting

PPC-5150 series is not only suitable for panel mounting but also for arm mounting with a 75/100mm interface pad; and the specification conform to VESA standard.

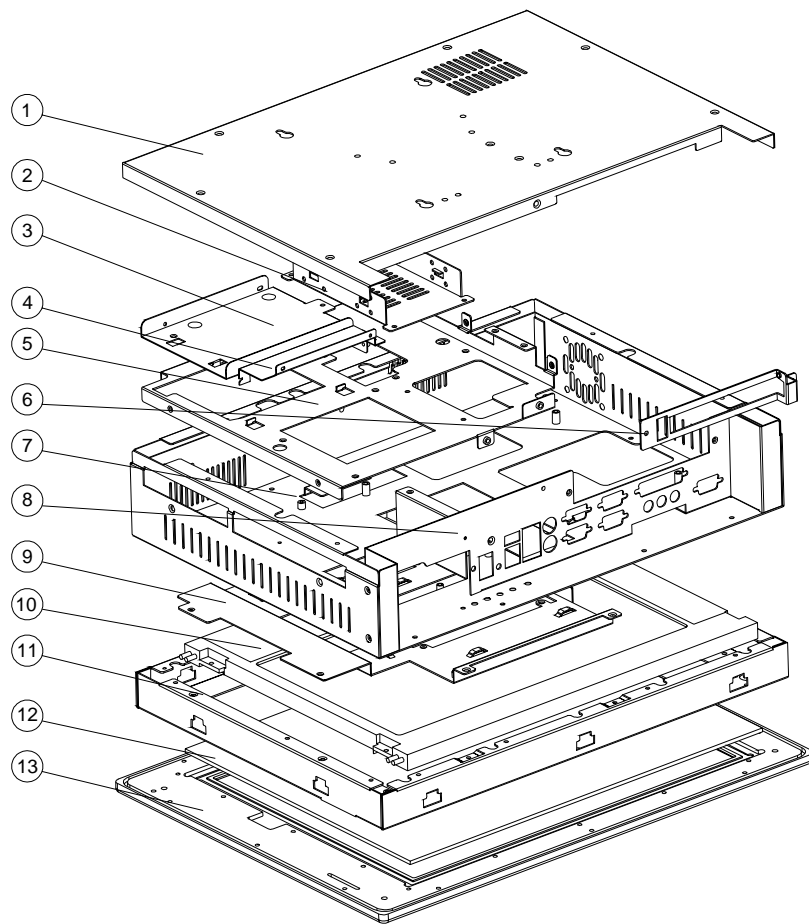


2.10 Rack Mounting

DM/SRM/PPC serial products provide optional rack-mount kit for industrial racks. The following drawings show how to mount DM/SRM/PPC serial product onto the 19" rack.

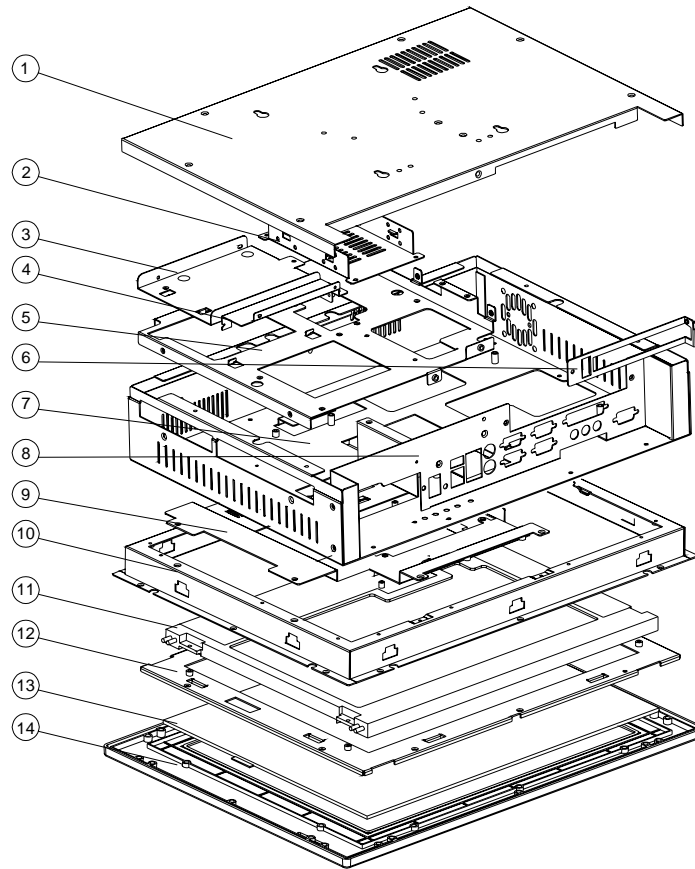


Appendix A Exploded Diagram of PPC-5150 With Aluminum Front Panel



ITEM	DESCRIPTION	Quantity
1	BACK COVER	1
2	HDD BRACKET	1
3	FDD BRACKET	1
4	CDROM BRACKET	1
5	DRIVES SHELF	1
6	REAR CARD FRAME	1
7	REAR BRACKET	1
8	REAR BRACKET	1
9	VGA BRACKET	1
10	15" TFT LCD	1
11	FRONT BRACKET	1
12	TOUCH PANEL	1
13	FRONT PANEL	1

Appendix B Exploded Diagram of PPC-5150 With Plastic Front Panel



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

Appendix C User Mode OSD & Brightness Feature Description

- **Auto-Adjustment**

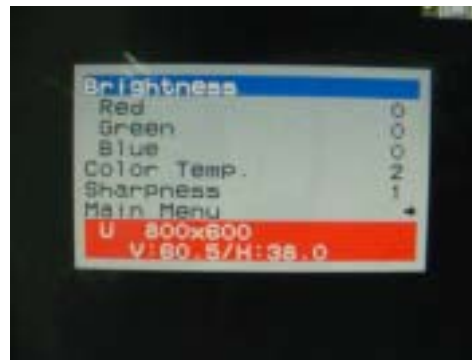
This feature will automatically adjust the H/V position, frequency, phase, and black level.

- **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 vary automatically, so the user should adjust them manually to match the proper VGA mode .



- **H. Position**

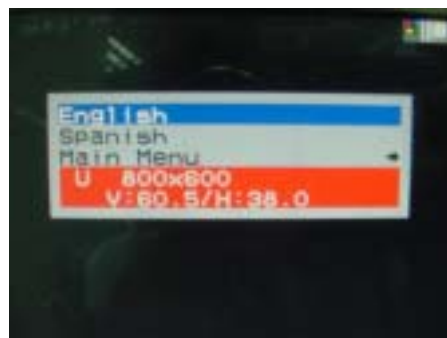
This option is used to adjust horizontal display position of image.

- **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 two 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 the next re-boot.



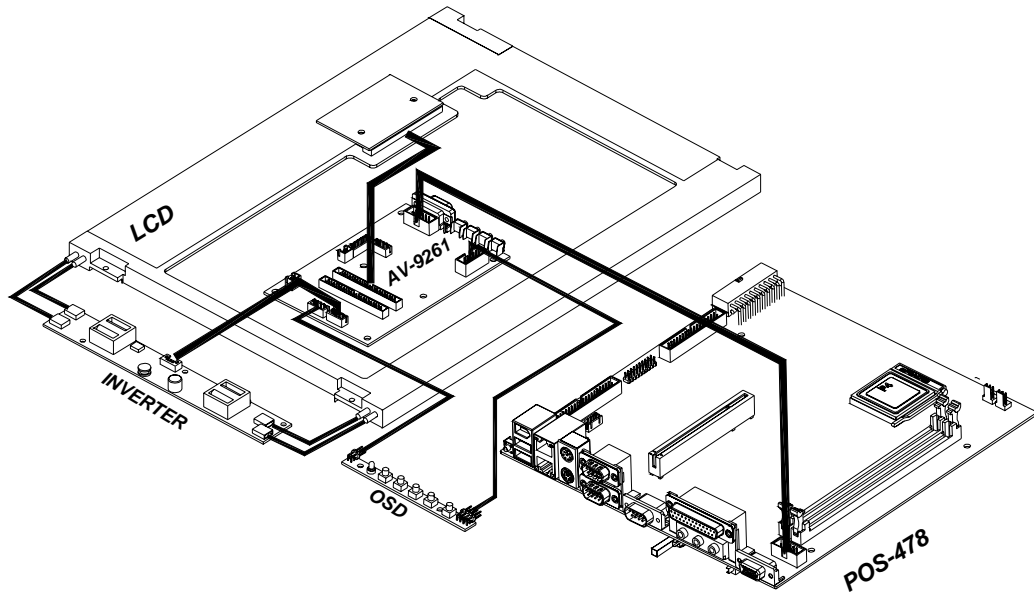
- **Main Menu**

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 the jobs are completed.

Appendix D Display Interface



Appendix E Touch Panel Controller

The following drawing shows the way cables connect to the optional resistive touch screen (T-R151B).

