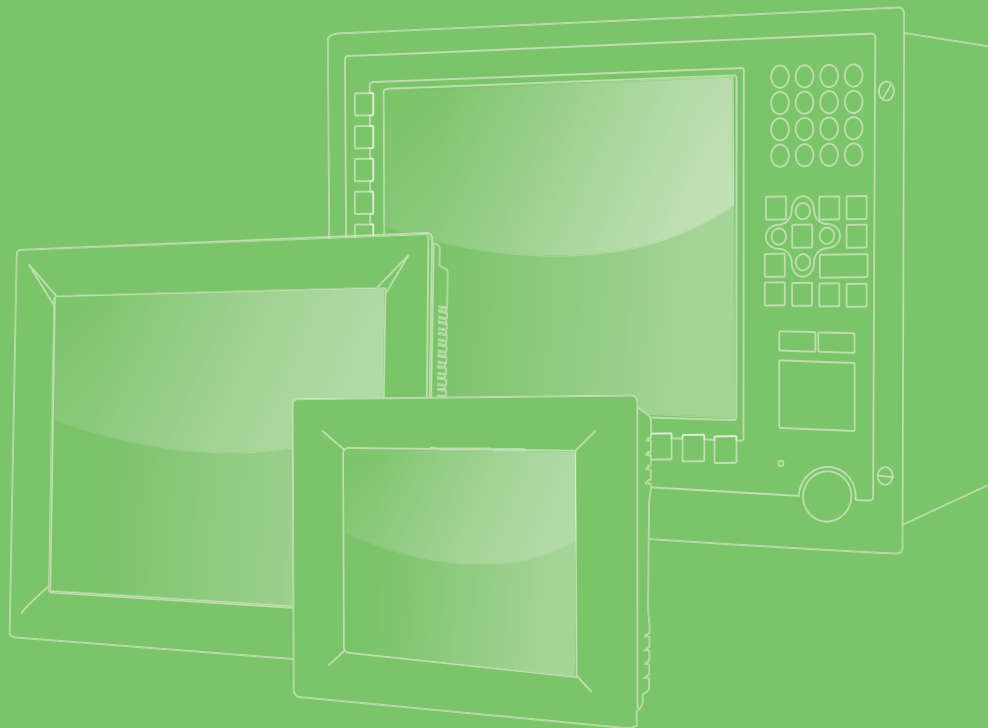


User Manual



FPM-5152G/5172G/ 5192G Series

**15" XGA/17" SXGA/19" SXGA
monitor with 18 ~ 32 V_{DC} input
voltage, resistive touchscreen
and display port**

ADVANTECH

Enabling an Intelligent Planet

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Product Warranty (2 years)

Advantech warrants to you, the original purchaser, that each of its products will be free from defects in materials and workmanship for two years from the date of purchase.

This warranty does not apply to any products which have been repaired or altered by persons other than repair personnel authorized by Advantech, or which have been subject to misuse, abuse, accident or improper installation. Advantech assumes no liability under the terms of this warranty as a consequence of such events.

Because of Advantech's high quality-control standards and rigorous testing, most of our customers never need to use our repair service. If an Advantech product is defective, it will be repaired or replaced at no charge during the warranty period. For out-of-warranty repairs, you will be billed according to the cost of replacement materials, service time and freight. Please consult your dealer for more details.

If you think you have a defective product, follow these steps:

1. Collect all the information about the problem encountered. (For example, CPU speed, Advantech products used, other hardware and software used, etc.) Note anything abnormal and list any onscreen messages you get when the problem occurs.
2. Call your dealer and describe the problem. Please have your manual, product, and any helpful information readily available.
3. If your product is diagnosed as defective, obtain an RMA (return merchandise authorization) number from your dealer. This allows us to process your return more quickly.
4. Carefully pack the defective product, a fully-completed Repair and Replacement Order Card and a photocopy proof of purchase date (such as your sales receipt) in a shippable container. A product returned without proof of the purchase date is not eligible for warranty service.
5. Write the RMA number visibly on the outside of the package and ship it prepaid to your dealer.

Declaration of Conformity

FCC Class B

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Technical Support and Assistance

1. Visit the Advantech web site at www.advantech.com/support where you can find the latest information about the product.
2. Contact your distributor, sales representative, or Advantech's customer service center for technical support if you need additional assistance. Please have the following information ready before you call:
 - Product name and serial number
 - Description of your peripheral attachments
 - Description of your software (operating system, version, application software, etc.)
 - A complete description of the problem
 - The exact wording of any error messages

Safety Instructions

1. Read these safety instructions carefully.
2. Keep this User Manual for later reference.
3. Disconnect this equipment from any AC outlet before cleaning. Use a damp cloth. Do not use liquid or spray detergents for cleaning.
4. For plug-in equipment, the power outlet socket must be located 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 overvoltage.
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:
 - The power cord or plug is damaged.
 - Liquid has penetrated into the equipment.
 - The equipment has been exposed to moisture.
 - The equipment does not work well, or you cannot get it to work according to the user's manual.
 - The equipment has been dropped and damaged.
 - The equipment has obvious signs of breakage.
15. **DO NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT WHERE THE STORAGE TEMPERATURE MAY GO BELOW -20° C (-4° F) OR ABOVE 60° C (140° F). THIS COULD DAMAGE THE EQUIPMENT. THE EQUIPMENT SHOULD BE IN A CONTROLLED ENVIRONMENT.**
16. Instructions for power adapter: **PLEASE CHOOSE POWER ADAPTER THAT CONFORMS TO CCC STANDARD.**

The sound pressure level at the operator's position according to IEC 704-1:1982 is no more than 70 dB (A).

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

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Chapter 1

Overview

This chapter includes:

- Introduction
- Specifications
- LCD Specification
- Power Consumption
- Connectors
- Dimensions

1.1 Introduction

Advantech's FPM-5152G/5172G/5192G series consists of 15"/17"/19" color TFT LCD flat panel monitors built specially for industrial applications. With the touch-screen, FPM-5152G/5172G/5192G series offer user-friendly system control interfaces.

In addition to usual application as an LCD panel monitor, FPM-5152G/5172G/5192G series come with display port control signal input making it compatible with Industrial PCs and Workstations. Its OSD (On Screen Display) function, enabling users to adjust monitor parameters (such as, brightness) and turn off/on backlight. Since HMI users pay more attention to the advantages of flat panel, its functionality becomes more important. FPM-5152G/5172G/5192G series come with stainless steel cases, with aluminum front panels compliant with NEMA4/IP65.

FPM-5152G/5172G/5192G is equipped with a touchscreen. With an 5-wire resistive type touchscreen, this monitor can be immediately transformed into a remote control system. The Advantech FPM-5152G/5172G/5192G is the ultimate HMI solution for your industrial applications.

1.2 Specifications

1.2.1 General

Specification	FPM-5152G	FPM-5172G	FPM-5192G
Construction	Heavy-duty aluminum and stainless steel chassis		
Front panel	Aluminum, NEMA4/IP65 compliant		
Control	OSD (On Screen Display) control pad on rear side		
Mounting	Panel, wallmount, desktop, VESA Arm or rackmount		
Dimensions (W x H x D)	449.92 x 315.63 x 50.5 mm (17.71" x 12.43" x 2")	481.93 x 355.87 x 55.00 mm (18.97" x 14.01" x 2.17")	481.93 x 384.60 x 59.00 mm (18.97" x 15.14" x 2.32")
Weight	6 kg (13.22 lbs)	8 kg (17.63 lbs)	10 kg (22.04 lbs)

1.2.2 Touchscreen

Specification	FPM-5152G	FPM-5172G	FPM-5192G
Type	5 wire, analog resistive		
Resolution	2048 x 2048		
Light transmission	80%		
Controller	USB interface		

1.3 LCD Specification

Specification	15" LCD	17" LCD	19" LCD
Display type	XGA TFT LCD	SXGA TFT LCD	SXGA TFT LCD
Display size	15"	17"	19"
Color	16.2M/262K	16.7 M (RGB 6bit+Hi-FRC data)	16.7 M (RGB 6bit+Hi-FRC data)
Max. Resolution	1024 x 768	1280 x 1024	1280 x 1024
Viewing angle	140°(V),120°(H)	140°(V),140°(H)	150°(V),140°(H)
Luminance	350 cd/m ²	350 cd/m ²	350 cd/m ²
Storage temperature	-30 ~ 85°C	-30 ~ 85°C	-20 ~ 60°C
Operating temperature	-30 ~ 85°C	-30 ~ 85°C	0 ~ 50°C
Contrast ratio	700:1 (typical)	1000:1 (typical)	1000:1 (typical)
Backlight life time (MTBF)	50,000 hrs	50,000 hrs	50,000 hrs

1.4 Connectors

The following connectors are on the left side of FPM-5152G/5172G/5192G series:

- Touchscreen Connector (USB)
This connector will only be present if a touchscreen is installed. It must be connected to the USB port of the PC. The touchscreen cable is included with all orders that include the touchscreen option.
- Plug-in 3P Power Connector
A male (ME050-50803) 18 ~ 32 V_{DC} power connector can be used to connect 3P power source to a flange female connector.

Note! Or a 18 ~ 32 V round-head power can be converted to a Phoenix connector through a power adapter.



1.5 Dimensions

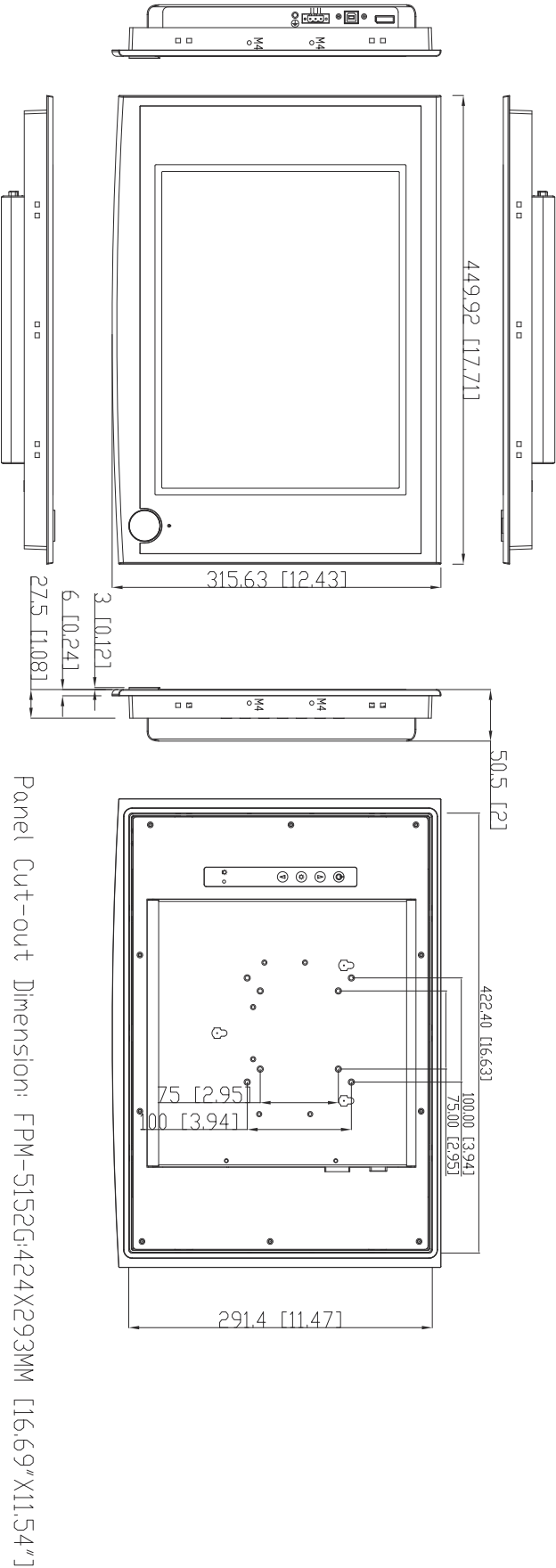


Figure 1.1 FPM-5152G Dimension

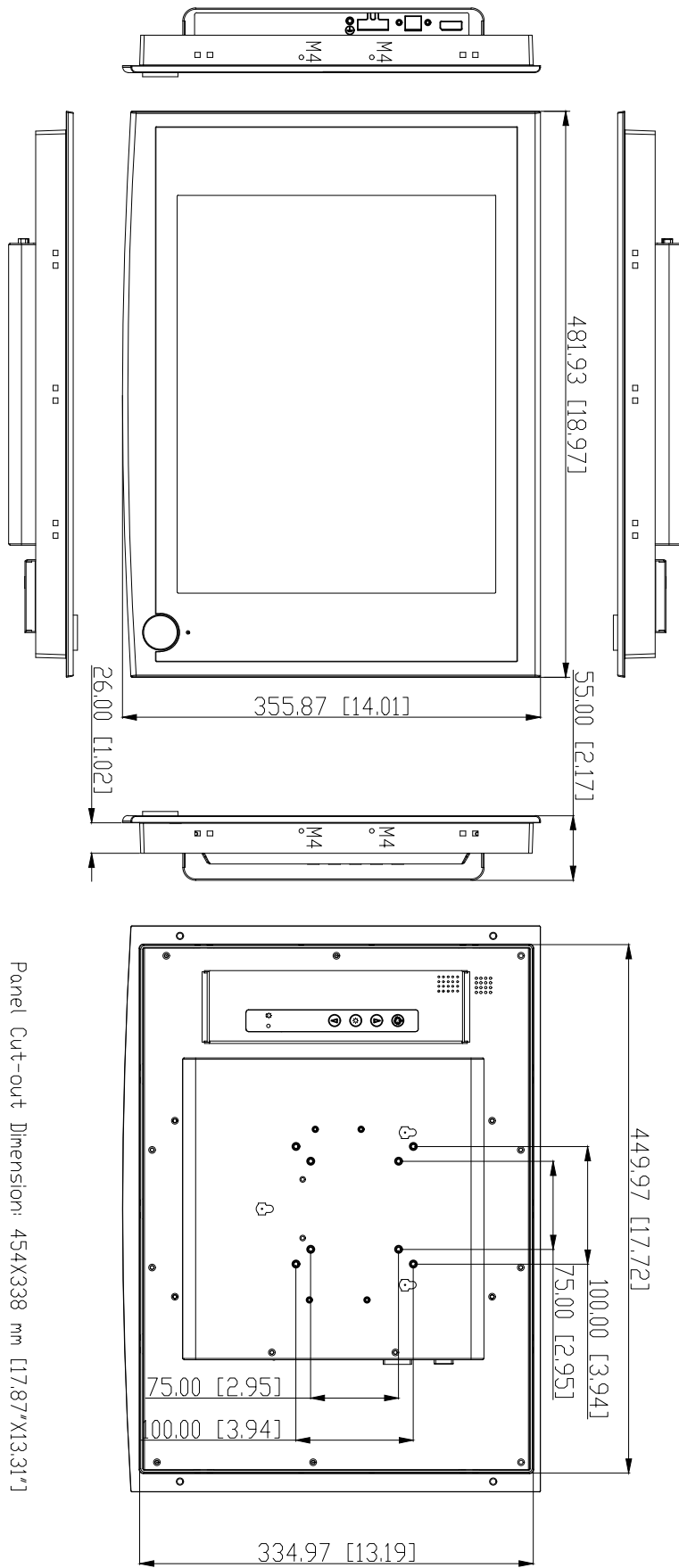


Figure 1.2 FPM-5172G Dimension

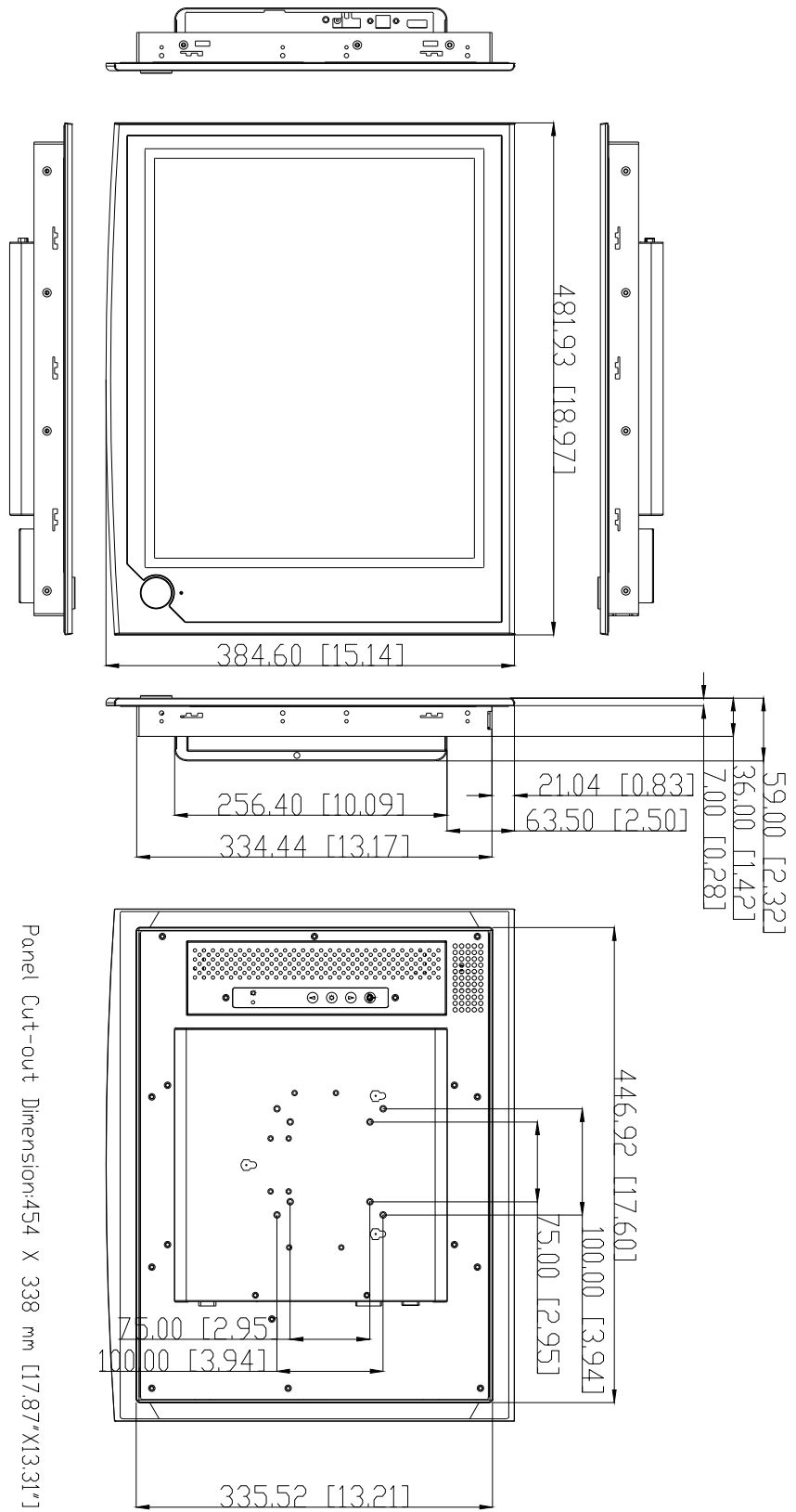


Figure 1.3 FPM-5192G Dimension

Chapter 2

System Setup

This chapter includes:

- Wall Mounting
- Panel Mounting
- Rack Mounting
- Desktop Mounting
- Swing-Arm Mounting

2.1 Monitor Installation

Monitors of FPM-5152G/5172G/5192G series can be flexibly mounted, enabling them to be mounted on your desk or almost anywhere else.

2.1.1 Wall Mounting

Users can directly install FPM-5152G/5172G/5192G on a wall through panel bracket. Refer to Figure 2.1 and following the steps below to install it:

1. Screw the hook and wall-mounted brackets on the wall.
2. Fix the brackets with 4 screws.
3. Screw the industrial monitor to the bracket.

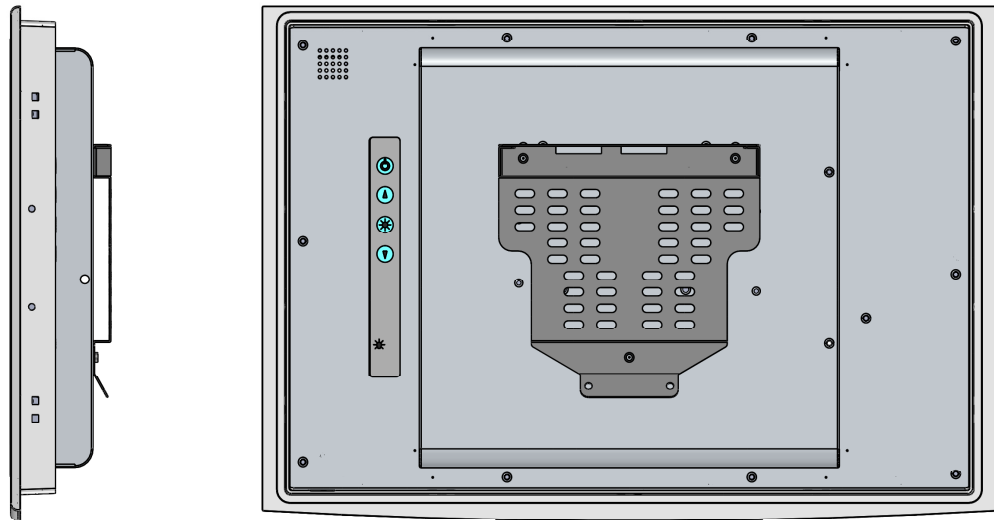


Figure 2.1 Wall Mounting

2.1.2 Panel Mounting

Users can directly install FPM-5152G/5172G/5192G on a panel through additional panel bracket. Refer to Figure 2.2 and following the steps below to install it:

1. Place the industrial monitor into 10pcs panel bracket.
2. Fasten the screws to fix it.

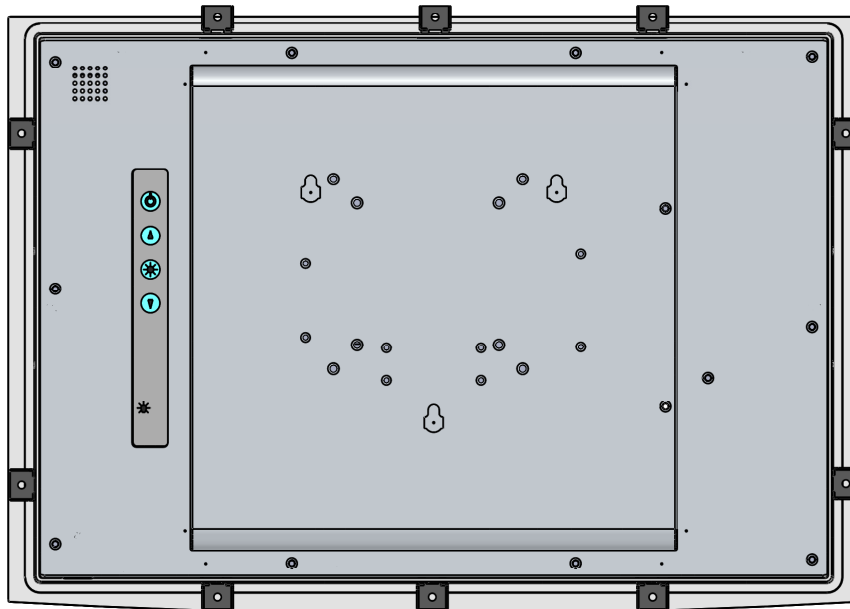


Figure 2.2 Panel Mounting

2.1.3 Rack Mounting

If users need to install FPM-5152G/5172G/5192G on a rack, then ,FPM-5152G/5172G/5192G rack mounting kit must be purchased (Model: IPPC-6152A-RMKE (15”)/IPPC-6172A-RMKE(17”)/IPPC-6192A-RMKE(19”).Screw the rack to the monitor firstly, then fix the monitor to the rack.

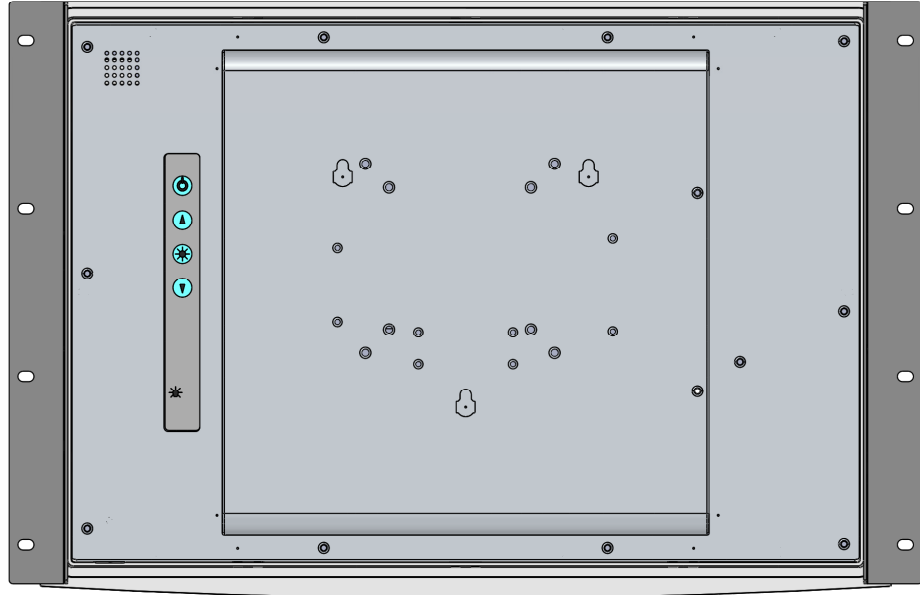


Figure 2.3 FPM-5152G Rack Mounting

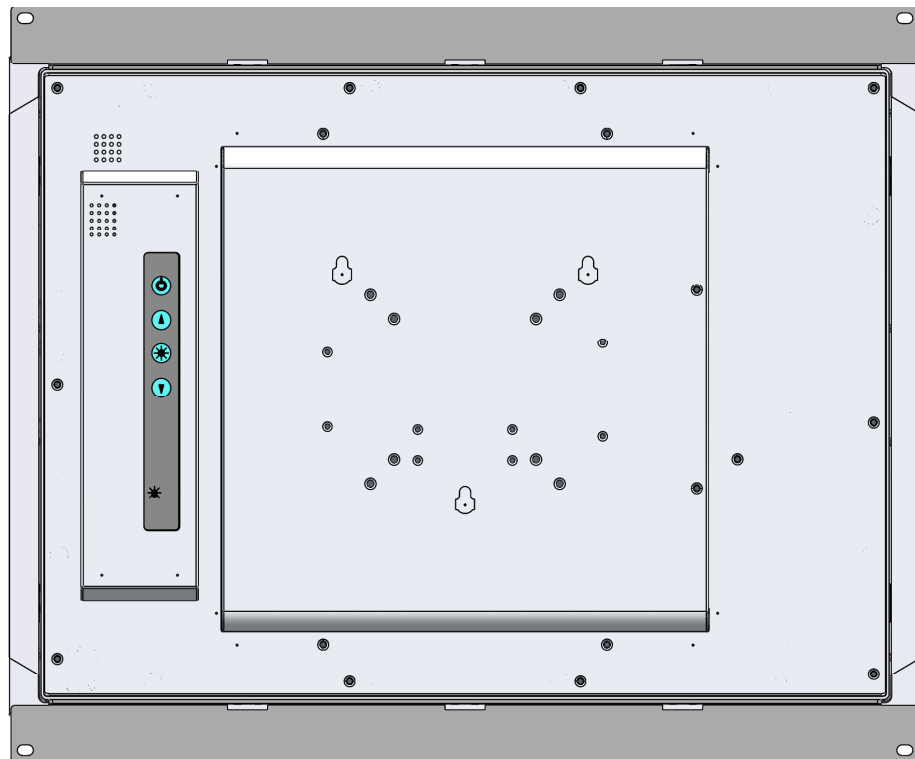


Figure 2.4 FPM-5172G Rack Mounting

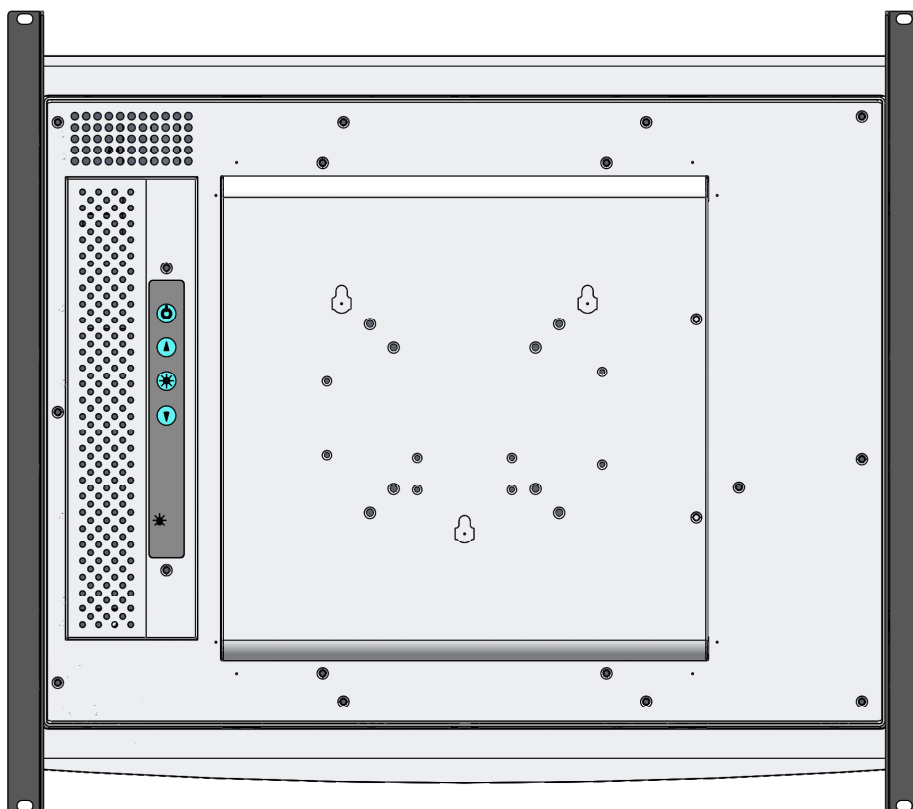


Figure 2.5 FPM-5192G Rack Mounting

2.1.4 Desktop Mounting and Swing-Arm Mounting

FPM-5152G/5172G/5192G monitors can also be mounted in other ways, such as desktop mounting and swing-arm mounting.

2.1.4.1 Desktop Mounting

Users can directly install FPM-5152G/5172G/5192G on a desk through additional panel bracket. Refer to Figure 2.6 to install it:

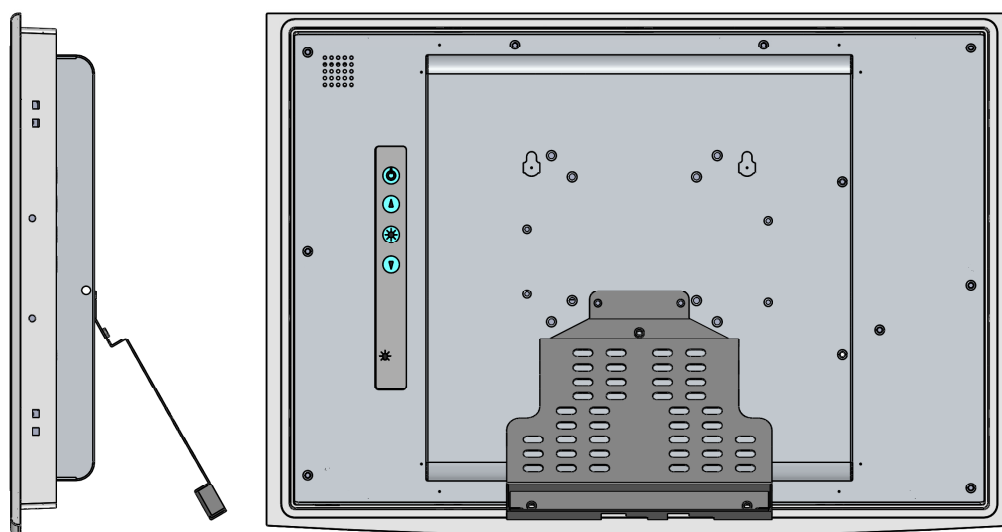


Figure 2.6 Desktop Mounting

2.1.4.2 Swing-Arm Mounting (VESA Standard)

The design of FPM-5152G/5172G/5192G conforms to VESA swing-arm mounting standard. Refer to Figure 2.7 to install it: This monitor supports 75 mm and 100 mm VESA dimensions.

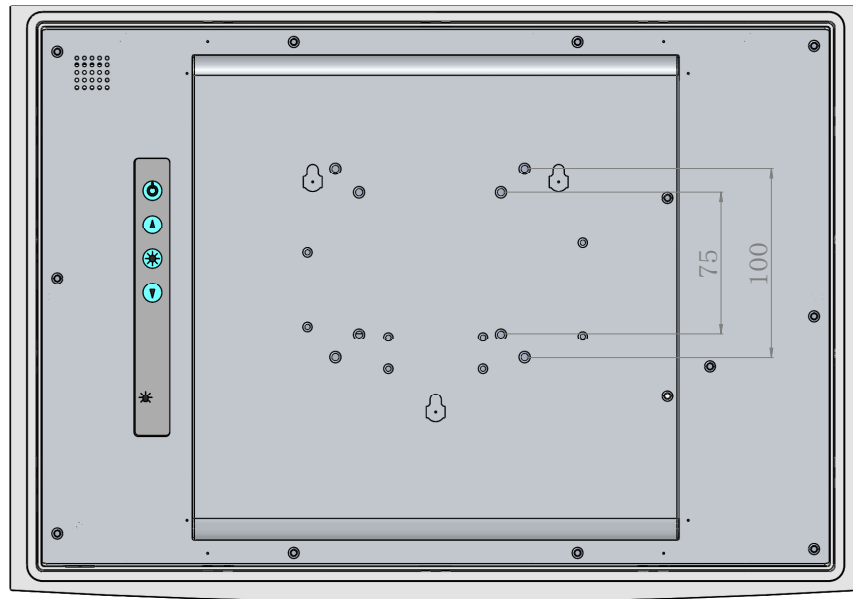


Figure 2.7 Swing-Arm Mounting

Appendix **A**

Touchscreen

A.1 Introduction

FPM-5152G/5172G/5192G series' touchscreen uses advanced 5 wire resistive technology. It provides more accurate sensing capacity than other technologies. The touchscreen is specially designed for tough industrial environments, and has been approved to FCC Class B standards.

A.2 Touchscreen Specifications(15"/17"/19")

A.2.1 Typical Optical Features

Specification	15"	17"	19"
Light transmission		> 80%	
Haze		< 13%	

A.2.2 Electrical Specifications

Specification	15"	17"	19"
Operating voltage		5.5 V or lower	
Contact current		70 mA (max.)	

A.2.3 Environmental Specifications

Specification	15"	17"	19"
Operating temperature		-10 ~ +60°C	
Storage temperature		-40 ~ +80°C	

A.3 Installing Driver for Windows OS

The touchscreen has drivers for Windows 2000/XP/2003/Vista. You should read the instructions on CD-ROM carefully before you attempt installation. Firstly, Penmount 6000 driver should be installed on FPM-5152G-R2AE/FPM-5172G-R2AE/FPM-5192G-R2AE. Users can find driver file in Penmount 6000 folder, then install it.

Note! *Illustrations in driver manual are examples only. Users must follow the flow chart instructions and pay attention to the instructions which then appear on the screen.*



Note! *If users need to install other OS drivers, please go to the website to download:*



<http://www.penmount.com> (Penmount 6000)

Appendix **B**

OSD Operation
Keypad

B.1 OSD Operation Keypad Overview

OSD Keypad has 3 buttons and 1 bi-colorLED indicator, which composed of OSD operation Keypad.



B.1.1 OSD Button Descriptions

Table B.1: OSD Button Descriptions

Power	Turn on/off monitor power
Brightness Up	Increase brightness
Brightness Down	Decrease brightness

B.1.2 LED Function Descriptions

Table B.2: LED Function Descriptions

ON	Green
StandBy/OFF	Flickering orange
No signal	Flickering orange

www.advantech.com

Please verify specifications before quoting. This guide is intended for reference purposes only.

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