



Hardware User Guide

DisplayPac-WN

Third Edition

Part No: MAN000xx Rev. 1.2

Document History

Version	Date	Description	Author
1.0	2008.11.20	First version	C.D.
1.1	2009.06.15	Add additional processor specifications.	C.D.
1.2	2010.09.20	Remove Pentium M and LX800 processor specifications. Add Atom processor specifications. Replace IO device illustration.	C.D.

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FCC Statement

This device complies with part 15 FCC rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a class "a" digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his/her own expense.

Warnings, Cautions, and Notes as Used in this Publication



Warning notices are used in this publication to emphasize that hazardous voltages, currents, temperatures, or other conditions that could cause personal injury exist in this equipment or may be associated with its use.

In situations where inattention could cause either personal injury or damage to equipment, a Warning notice is used.



Caution notices are used where equipment might be damaged if care is not taken.



Notes merely call attention to information that is especially significant to understanding and operating the equipment.

Important Safety Precautions

Warning



Always completely disconnect the power cord from your chassis whenever you work with the hardware. Do not make connections while the power is on. Sensitive electronic components can be damaged by sudden power surges. Only experienced electronics personnel should open the PC chassis.

Caution



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

Safety and Warranty



- Please read these safety instructions carefully.
- Please keep this user's manual for later reference.
- Please disconnect this equipment from any AC outlet before cleaning. Do not use liquid or spray detergents for cleaning, use a damp cloth.
- For pluggable equipment, the power outlet must be installed near the equipment and must be easily accessible.
- Keep this equipment away from humidity.
- Put this equipment on a reliable surface during installation. Dropping it or letting it fall could cause damage.
- The openings on the enclosure are for air convection. Protect the equipment from overheating. **DO NOT COVER THE OPENINGS.**
- Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
- Position the power cord so that people cannot step on it. Do not place anything over the power cord.
- All cautions and warnings on the equipment should be noted.
- If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient over-voltage.
- Never pour any liquid into an opening. This could cause fire or electrical shock.
- Never open the equipment. For safety reasons, only qualified service personnel should open the equipment.
- If any 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.
- 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), as this may damage the equipment.

Unpacking

After unpacking the DisplayPac-WN, check to ensure the following items are included and in good condition. Do not attempt to apply power to the system if there is damage to any of its components.

- 1x DisplayPac-WN main system
- 1x Power adapter
- 1x Power cord
- 1x Touch Driver CD (optional)
- Mounting screws (optional)

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1. General Information

The DisplayPac-WN is a high performance, low power PC with Intel® 945 GME chipset combined with a TFT LCD panel. The Intel Core™ 2 Duo high performance processor delivers the most performance per watt available in the market. The DisplayPac-WN is designed to satisfy most of the applications in the industrial market, such as POS, KIOSK, Industrial Automation, HMI and Programmable Control System. It is a PC-based system with DDR2 SDRAM, VGA/LCD controller, four COM ports, and on-board 10/100/1000 Mbps Base-T Ethernet. The DisplayPac-WN supports one Mini-PCI expansion slot for Wireless, Ethernet, COM port, and VGA solutions. The compact design meets the demanding performance requirements of today's business and industrial applications.

1.1. DisplayPac-WN Specifications

Form Factor	Mini-ITX	
CPU	Intel Core 2 Duo	Intel Atom N270 1.6 GHz
Chipset	Intel Socket M	Intel 945GSE / ICH7M
Memory	2x 240-pins DDR2 DIMM sockets, supports up to 4 GB	2 GB DDR2
BIOS	Award	AMI 4 Mbit
Ethernet	2x GigaLAN (Dual Realtek RTL8111B controller)	2x Gigabit
Audio	Realtek ALC655, 5.1 channel (Line-out, Line-in & MIC-in)	Realtek ALC203 AC97 Chipset
IDE	One channel; supports Ultra DMA 33/66/100	1x 44-pin IDE (UDMA 33/66/100)
Serial	4x RS-232 (3x Rear I/O, 1x pin-header)	4x ports (3x RS-232 with two on rear, 1x rear I/O RS-232/422/485)
USB	8x USB 2.0 (4x rear I/O, 4x pin-header)	8x USB 2.0 (4x rear)
Expansion	1x Mini PCI	1x Mini PCI (optional)
Power Input	DC-in 4-pin 12V	DC-in 12V
HDD	40 GB (default) 80 GB 2.5" (optional) CF (optional)	80 GB 2.5" (10.4", 12.1") 160 GB 3.5" (15" and larger) SSD (optional) CF (optional)
OS Support	Windows® XP (optional)	Windows® XP Pro for ES (optional)

1.2. LCD Selection Guide

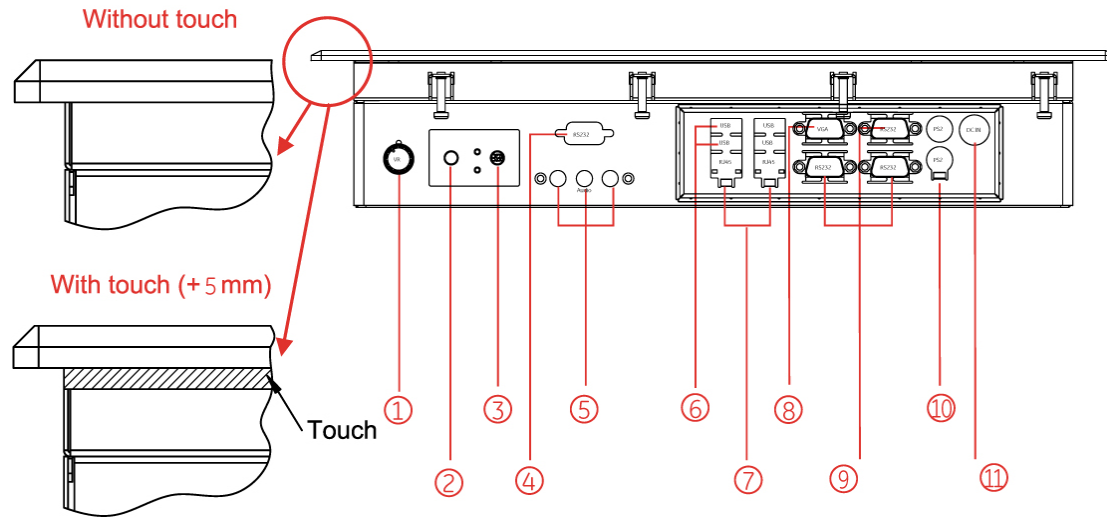
The DisplayPac-WN supports 5.7" to 19" TFT Panel with touchscreen. Please refer to the chart below:

LCD Size	Resolution (Recommended)	Display Color
10.4"	800x600	262,144 (6 bit/colors)
12.1"	800x600	262,144 (6 bit/colors)
15"	1024x768	16.7M (6 bit/color + FRC)
17"	1280x1024	16.7M (6 bit/color + FRC)
19"	1280x1024	16.7M (8 bit/colors)

2. Getting Started

2.1. Input / Output Devices

The following figure shows the I/O arrangement of the DisplayPac-WN. The backside of the chassis contains most of the connectors (10.4" is shown as an example).



1	Brightness Adjustment Knob	5	Audio Jack	9	RS-232
2	Power On	6	USB	10	PS/2
3	Power Reset	7	RJ-45	11	DC IN Power Jack
4	RS-232 (optional)	8	VGA Out		

2.2. Starting the DisplayPac-WN and O/S Installation

1. Connect the power to the AC/DC adapter, and connect the power cord to the AC outlet.
2. Press the "Power On" switch to start the DisplayPac-WN.
3. Press "DEL" to enter CMOS and check the BIOS setup.
4. You may install your own O/S if not already installed.
5. When installing O/S, please follow the steps and use external equipment such as Keyboard and Mouse.

Please use external USB DVD-ROM to run the O/S and Driver setting (as picture showed below).



3. Touch Driver Installation

3.1. Introduction

The DisplayPac-WN supports the ELO AccuTouch touchscreen system, which consists of a touchscreen and an electronic touchscreen controller.

The DisplayPac-WN touch device uses a RS-232 interface touch controller card via the COM3 port inside the DisplayPac-WN. When the touch driver is installed, the ELO system will detect COM4 port automatically.

The ELO AccuTouch touchscreen is based on patented resistive technology. It is installed over the face of the display. Since its shape matches of the display face, the touchscreen has excellent clarity and minimal parallax.

3.2. The ELO AccuTouch Driver Installation

ELO AccuTouch driver software provides a consistent software interface among all ELO AccuTouch touch screens and controllers.

Go to <http://www.elotouch.com/Support/dnld.asp> for a complete list of available drivers.

For Driver Installation, please install the “ELO Touch System Touch Tools CD” for Windows XP, Windows 2000, Windows Me, Windows 98, Windows 95, Windows NT, Windows CE 2.x, 3.0, 4.x, Windows XP Embedded, Windows 3.1, DOS, OS/2 Warp, and Apple Macintosh. Just follow the step-by-step instructions to install the driver.

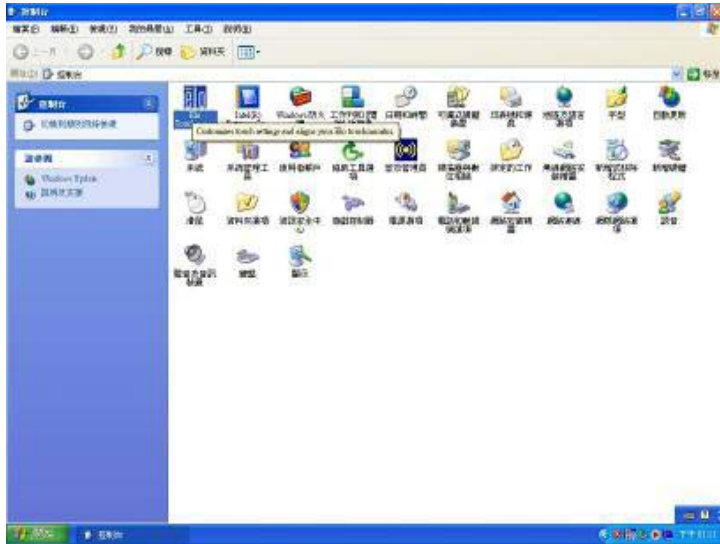
Choose “Auto-detect ELO devices ” in the first step. If not, the following step will require users to choose COM3 port for detecting the devices.



3.2.1. Configuration Utility

After finishing the installation, please follow the steps to test the configuration utility.

Step 1. Enter "My Computer", click the "ELO touchscreen" short-cut function.



Step 2. Click "Align" function key to go to next step.



Step 3. Correct 4 point locations on screen with the DisplayPac-WN. Screen display as follows.



Step 4. Touch the "yes" function if the cursor follows your finger and finish the utility test.

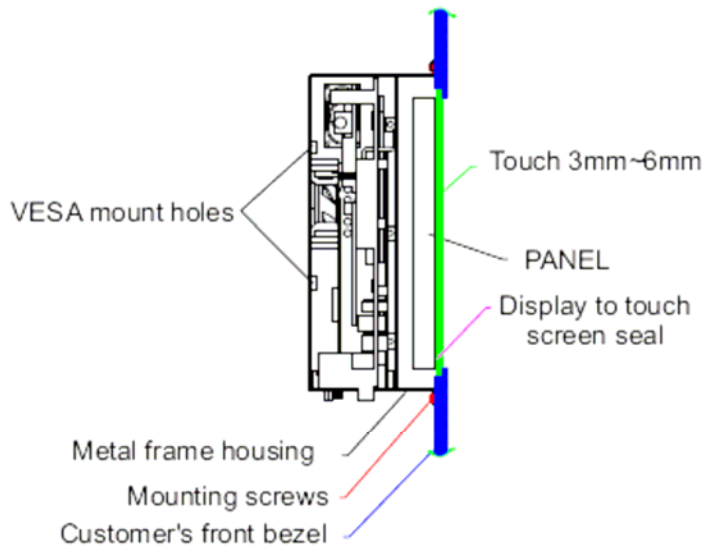


4. DisplayPac-WN Mounting Guide

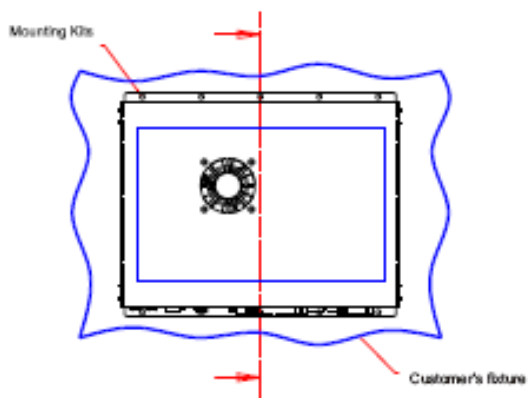
The DisplayPac-WN is suitable for most industrial/commercial applications, by any kind of mounting approach. Three main mounting approaches: Panel Mount / Chassis / Open Frame are very easy for users to install, as the following illustrations show:

4.1. Open Frame DisplayPac-WN

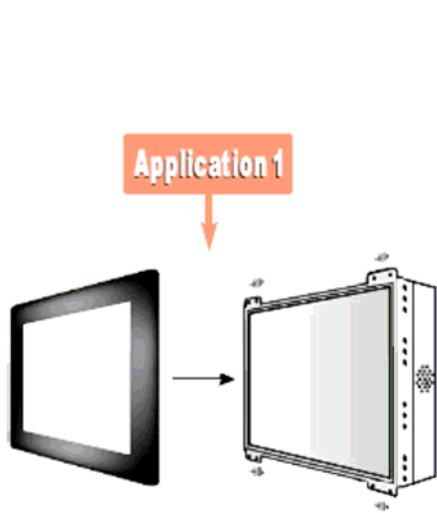
- Panel is aligned with the front of the open frame metal housing
- Users can affix the DisplayPac-WN with their own front bezel.
- VESA mount holes are also available for mounting from the rear.



SIDE VIEW



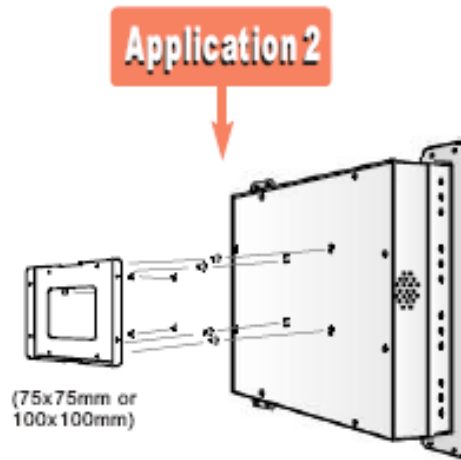
REAR VIEW



Application 1

PANEL MOUNT

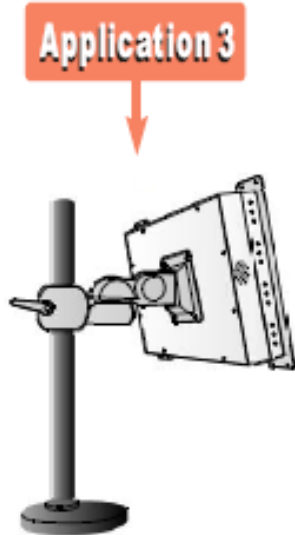
-mount with front bezel and then mounted into customer's panel.



Application 2

WALL MOUNTING

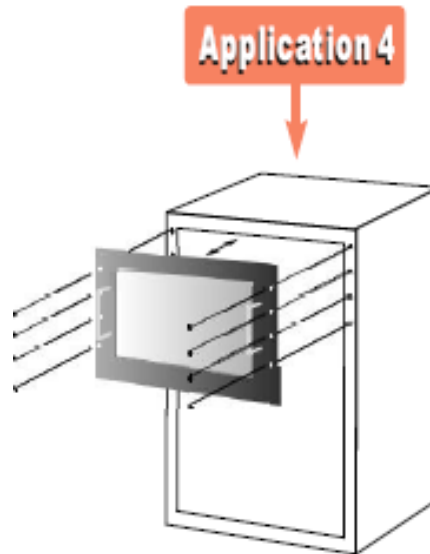
-mount with VESA mount kits and then mounted into wall.



Application 3

ARM MOUNTING

-mount with VESA mount kit and then mounted with swimming arms.



Application 4

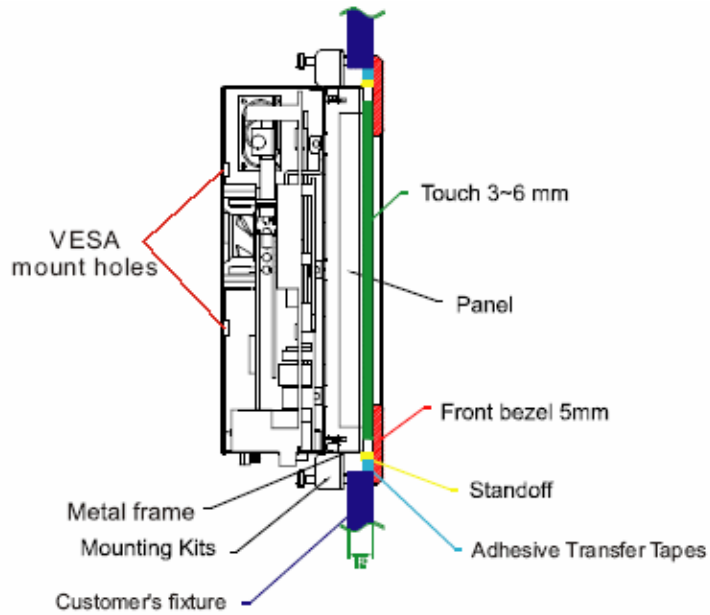
RACK MOUNTING

-mount with rack front bezel and then mounted into racks.

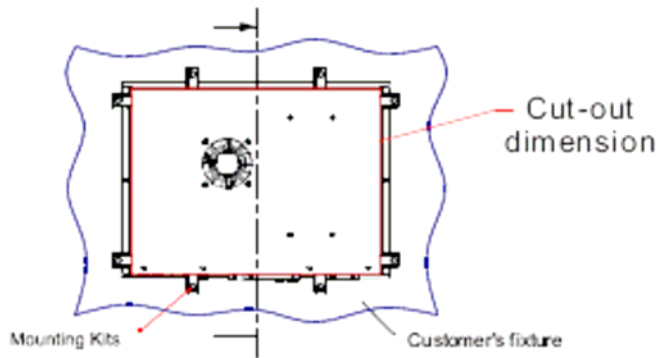
DisplayPac-WN Size	VESA Mount Dimension	VESA Mount Dimension
5.7"	75 x 75 mm	
10.4"	75 x 75 mm	
17"	75 x 75 mm	100 x 100 mm
19"	75 x 75 mm	100 x 100 mm

4.2. 5 mm Panel Mount DisplayPac-WN

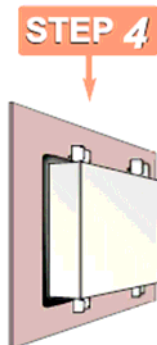
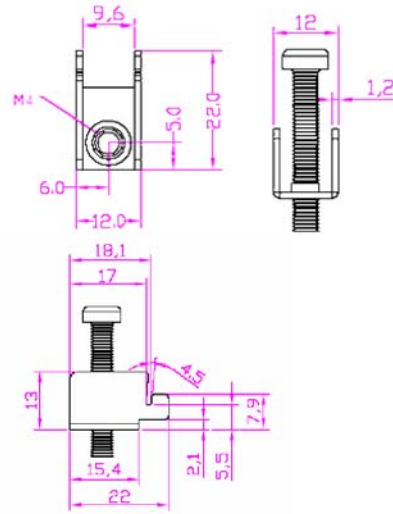
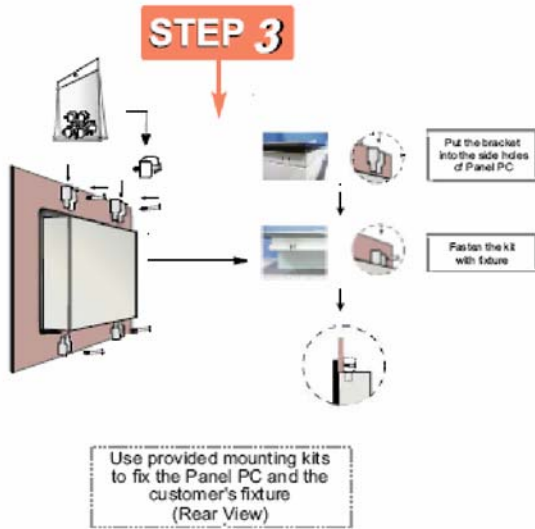
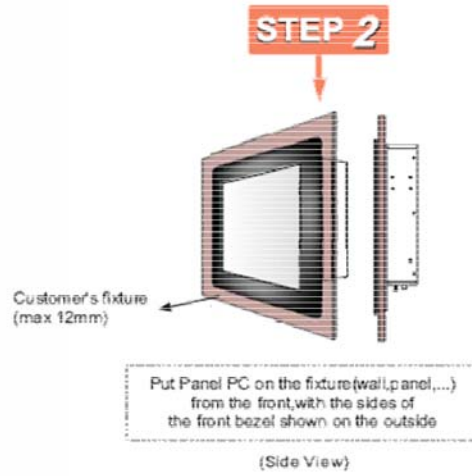
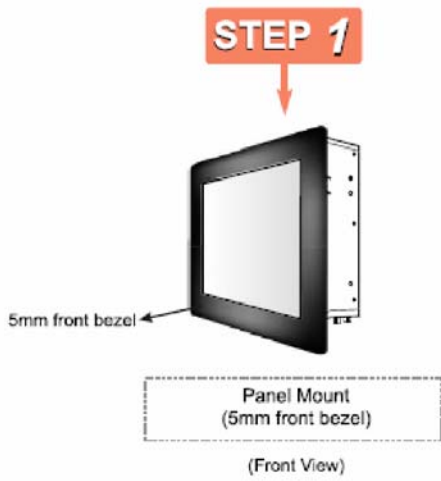
- Panel is aligned with the front of the open frame metal housing
- Touch/Glass is higher than open-frame metal housing.
- Users can affix the DisplayPac-WN to their fixture (max. 12 mm)
- VESA mount holes are also available for mounting from the rear.



SIDE VIEW



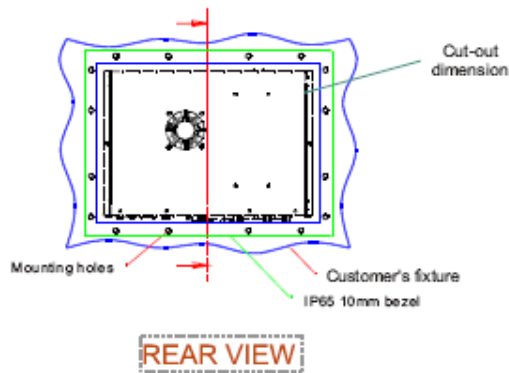
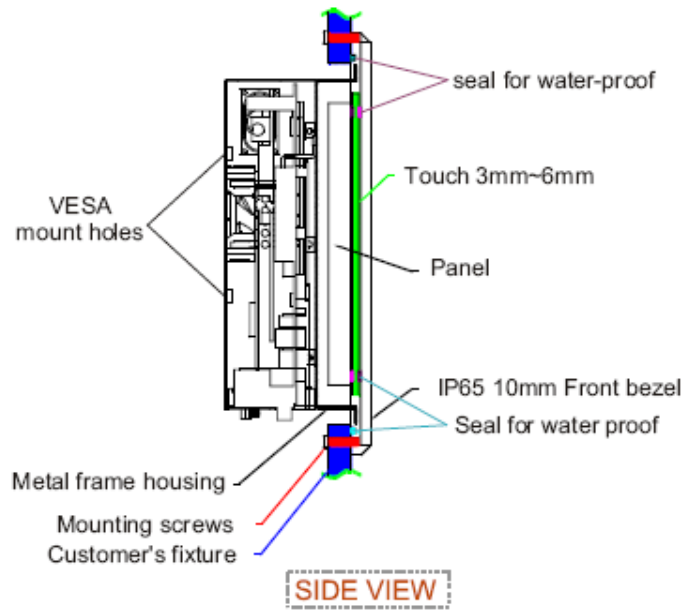
REAR VIEW

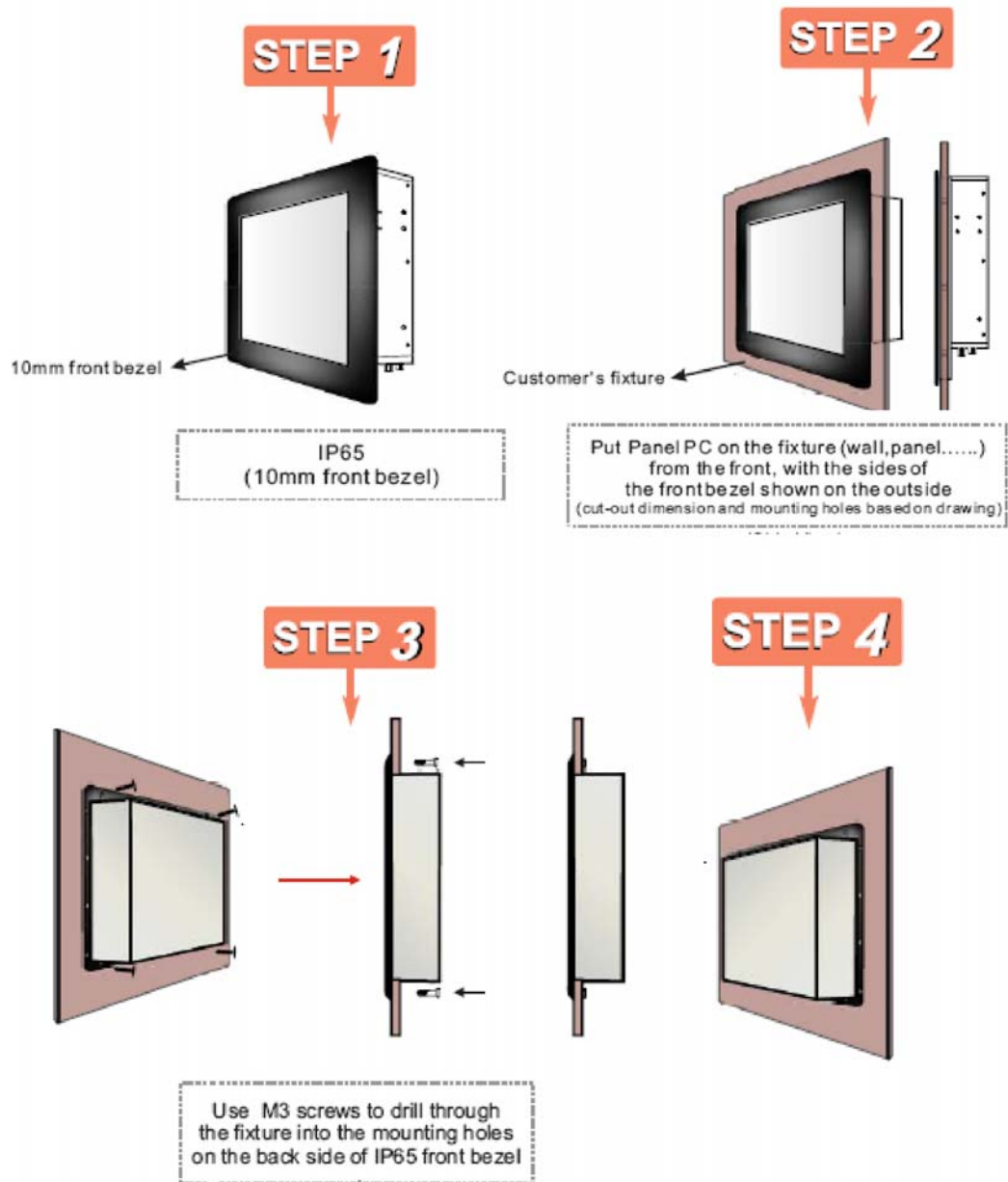


DisplayPac-WN PM 5 mm	
Size	Mounting Kits (pcs)
10.4"	8
12.1"	10
15"	12
17"	12
19"	14

4.3. 10 mm IP65 DisplayPac-WN

- Touch/Glass is aligned with the front of the open frame metal housing.
- Users can affix the DisplayPac-WN to their fixture by M3 screws.
- VESA mount holes are also available for mounting from the rear.

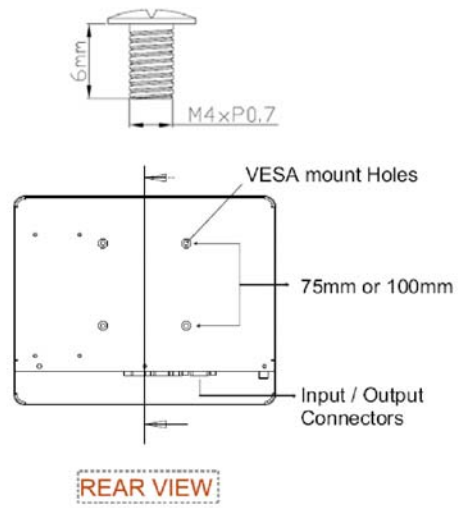
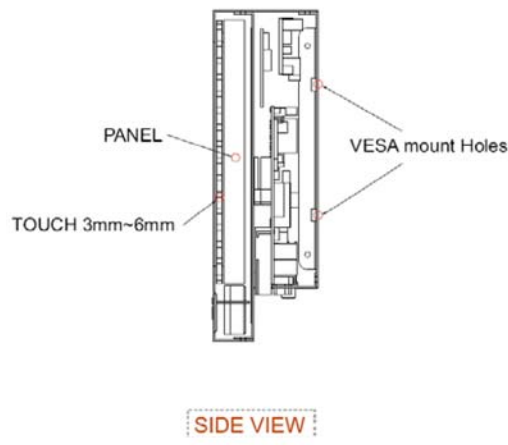




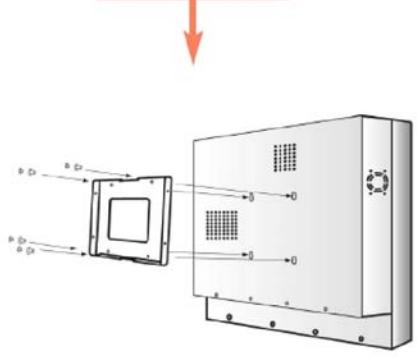
4.4. Chassis DisplayPac-WN

Affix the DisplayPac-WN with four screws (standard VESA), and fasten to the wall with other four screws.

- 100 x 100 mm
- 75 x 75 mm



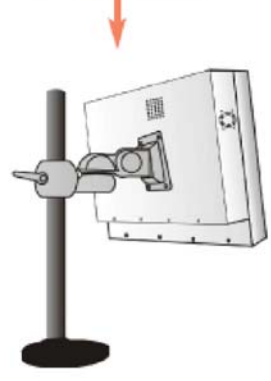
Application 1



WALL MOUNTING

-mount with VESA mount kits and then mounted into wall.

Application 2



ARM MOUNTING

-mount with VESA mount kit and then mounted with swimming arms.

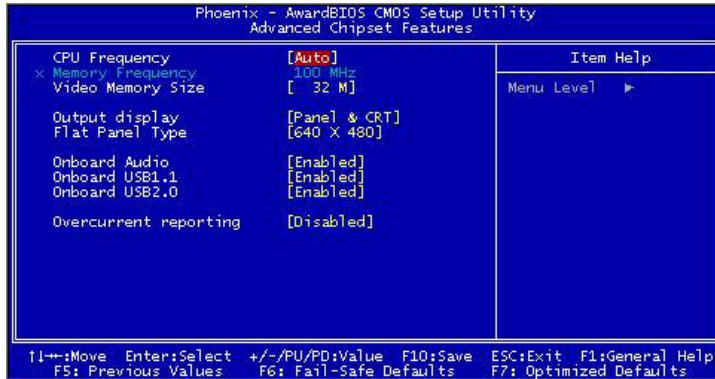
DisplayPac-WN Size	VESA Mount Dimension	VESA Mount Dimension
5.7"	75 x 75 mm	
10.4"	75 x 75 mm	
12.1"	75 x 75 mm	
15"	75 x 75 mm	100 x 100 mm
17"	75 x 75 mm	100 x 100 mm
19"	75 x 75 mm	100 x 100 mm

5. Known Issues

1. There might be some image noises displayed at the time of PC boot and Windows start up.
2. When using an “external display” as CRT or LCD for external mode (Panel & CRT), the resolution of external display may be recommended equal to the CMOS setting for panel [Flat Panel Type]. Lower resolution than CMOS setting in Windows may cause indistinct display.

Recommendation in CMOS setting:

- Choose “CRT” only when use external display.
- Choose “Panel” only when use internal panel display.



6. RMA Request & Return Form

If you need to return one of our products for repair, please complete our RMA Request Form found on the [support page](#) of our website.

About Computer Dynamics

Computer Dynamics (A GE Intelligent Platforms Company) is a leading global provider of flat panel display solutions for a wide range of industries and applications. Our comprehensive product offering includes open-frame, enclosed, and environmentally sealed flat panel display systems in both computer and monitor configurations. The company is headquartered in the U.S. and is a part of GE Intelligent Platforms. Whether you're looking for one of our standard products or a fully custom solution, Computer Dynamics has the breadth, experience and 24/7 support to deliver what you need. For more information, visit www.cdynamics.com/contact.asp.

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