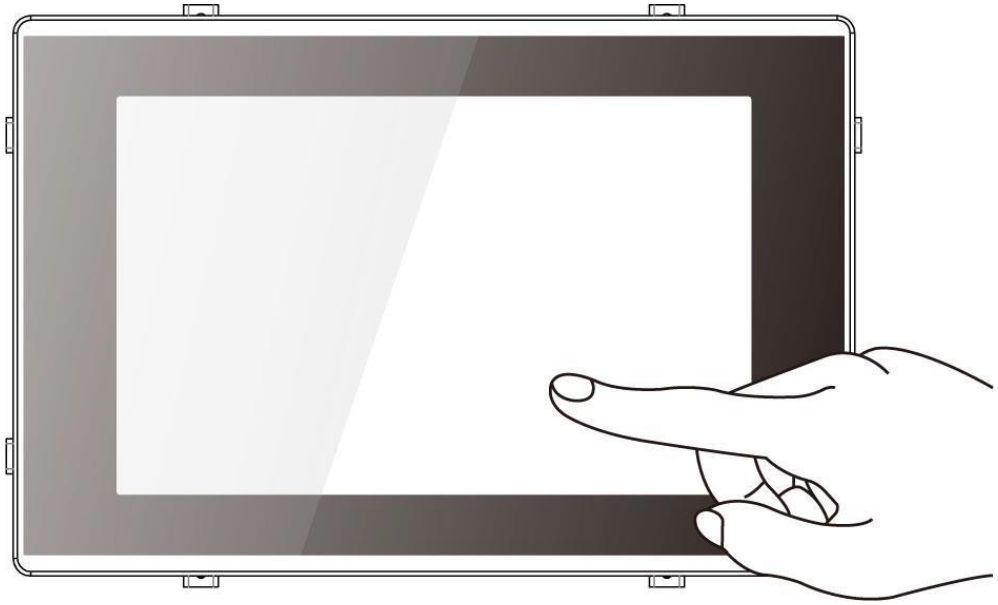
E-Series HMI Display



Model No. W07L100-EHT1
W10L100-EHH2
R15L100-EHC3
W15L100-EHA4
W22L100-EHA3

User Manual

Document Version : 1.0
Document Part Number : 91521110104B

Please read these instructions before operating the device and retain them for future reference.

Contents

Preface

Copyright Notice

Trademark Acknowledgement

Disclaimer

We reserve the right to make changes, without notice, to any product, including circuits and/or software described or contained in this manual in order to improve design and/or performance. We assume no responsibility or liability for the use of the described product(s) conveys no license or title under any patent, copyright, or masks work rights to these products, and make no representations or warranties that these products are free from patent, copyright, or mask work right infringement, unless otherwise specified. Applications that are described in this manual are for illustration purposes only. We make no representation or guarantee that such application will be suitable for the specified use without further testing or modification.

Warranty

Our warranty guarantees that each of its products will be free from material and workmanship defects for a period of one year from the invoice date. If the customer discovers a defect, we will, at his/her option, repair or replace the defective product at no charge to the customer, provide it is returned during the warranty period of one year, with transportation charges prepaid. The returned product must be properly packaged in its original packaging to obtain warranty service. If the serial number and the product shipping data differ by over 30 days, the in-warranty service will be made according to the shipping date. In the serial numbers the third and fourth two digits give the year of manufacture, and the fifth digit means the month (e. g., with A for October, B for November and C for December).

For example, the serial number 1W18Axxxxxxxx means October of year 2018.

Customer Service

We provide a service guide for any problem by the following steps: First, visit the website of our distributor to find the update information about the product. Second, contact with your distributor, sales representative, or our customer service center for technical support if you need additional assistance.

You may need the following information ready before you call:

- Product serial number
- Software (OS, version, application software, etc.)
- Description of complete problem
- The exact wording of any error messages

In addition, free technical support is available from our engineers every business day. We are always ready to give advice on application requirements or specific information on the installation and operation of any of our products.

Advisory Conventions

Four types of advisories are used throughout the user manual to provide helpful information or to alert you to the potential for hardware damage or personal injury. These are Notes, Important, Cautions, and Warnings. The following is an example of each type of advisory.

Note:
A note is used to emphasize helpful information

Important:
An important note indicates information that is important for you to know.

Caution / Attention
A Caution alert indicates potential damage to hardware and explains how to avoid the potential problem.
Une alerte d'attention indique un dommage possible à l'équipement et explique comment éviter le problème potentiel.

Warning! / Avertissement!
An Electrical Shock Warning indicates the potential harm from electrical hazards and how to avoid the potential problem.
Un Avertissement de Choc Électrique indique le potentiel de chocs sur des emplacements électriques et comment éviter ces problèmes.

Alternating Current / Mise à la terre !
The Protective Conductor Terminal (Earth Ground) symbol indicates the potential risk of serious electrical shock due to improper grounding.
Le symbole de Mise à Terre indique le risqué potentiel de choc électrique grave à la terre incorrecte.

Safety Information

Warning! / Avertissement!
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.
Toujours débrancher le cordon d'alimentation du chassis lorsque vous travaillez sur celui-ci. Ne pas brancher de connections lorsque l'alimentation est présente. Des composantes électroniques sensibles peuvent être endommagées par des sauts d'alimentation. Seulement du personnel expérimenté devrait ouvrir ces chassis.

Caution/ Attention

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.

Toujours verifier votre mise à la terre afin d'éliminer toute charge statique avant de toucher la carte CPU. Les équipements électroniques modernes sont très sensibles aux décharges d'électricité statique. Toujours utiliser un bracelet de mise à la terre comme précaution. Placer toutes les composantes électroniques sur une surface conçue pour dissiper les charges, ou dans un sac anti-statique lorsqu'elles ne sont pas dans le chassis.

Safety Precautions

For your safety carefully read all the safety instructions before using the device. Keep this user manual for future reference.

- Always 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 and to protect the equipment from overheating.

CAUTION/ATTENTION

Do not cover the openings!

Ne pas couvrir les ouvertures!

- Before connecting the equipment to the power outlet make sure the voltage of the power source is correct.
- Position the power cord so that people cannot step on it. Do not place anything over the power cord.
- 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.
- All cautions and warnings on the equipment should be noted.

Let service personnel to check the equipment in case any of the following problems appear:

- 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 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). It may damage the equipment.

CAUTION/ATTENTION
Use the recommended mounting apparatus to avoid risk of injury.
Utiliser l'appareil de fixation recommandé pour éliminer le risque de blessure.

WARNING! / AVERTISSEMENT!
Only use the connection cords that come with the product. When in doubt, please contact the manufacturer.
Utiliser seulement les cordons d'alimentation fournis avec le produit.
Si vous doutez de leur provenance, contactez le manufacturier.

WARNING! / AVERTISSEMENT!
Always ground yourself against electrostatic damage to the device.
Toujours vérifier votre mise à la terre afin que l'équipement ne se décharge pas sur vous.

- Cover workstations with approved anti-static material. Use a wrist strap connected to a work surface and properly grounded tools and equipment.
- Use anti-static mats, heel straps, or air ionizer for added protection.
- Avoid contact with pins, leads, or circuitry.
- Turn off power and input signals before inserting and removing connectors or test equipment.
- Keep the work area free of non-conductive materials, such as ordinary plastic assembly aids and Styrofoam.
- Use filed service tools, such as cutters, screwdrivers, and vacuum cleaners that are conductive.
- Always put drivers and PCB's component side on anti-static foam.

Important Information

Federal Communications Commission Radio Frequency Interface 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 "B" 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 him own expense.

EC Declaration of Conformity

This equipment is in conformity with the requirement of the following EU legislations and harmonized standards. Product also complies with the Council directions.

Electromagnetic Compatibility Directive (2014/30/EU)

- EN55024: 2010 EN 55022: 2010 Class B
  - IEC61000-4-2: 2009
  - IEC61000-4-3: 2006+A1: 2007+A2: 2010
  - IEC61000-4-4: 2012
  - IEC61000-4-5: 2014
  - IEC61000-4-6: 2013
  - IEC61000-4-8: 2010
  - IEC61000-4-11: 2004
- EN55022: 2010/AC:2011
- EN61000-3-2:2014
- EN61000-3-3:2013

Low Voltage Directive (2014/35/EU)

- EN 60950-1:2006/A11:2009/A1:2010/A12:2011/ A2:2013

About this User Manual

This User Manual provides information about using the Winmate® E-Series HMI Display. This User Manual applies to the E-Series HMI –W07L100-EHT1, W10L100-EHH2, R15L100-EHC3, W15L100-EHA4 and W22L100-EHA3.

The documentation set for the E-Series HMI with Freescale® Cortex® A9 i.MX6 Dual Core provides information for specific user needs, and includes :

- **E-Series HMI User Manual** – contains detailed description on how to use the HMI device, its components and features.
- **E-Series HMI Quick Start Guide** - describes how to get the HMI up and running.

NOTE:
Some pictures in this guide are samples and can differ from actual product.

Document Revision History

Version	Date	Note
1.0	18-Oct-2024	Initial Document Release

Chapter 1: Introduction

Congratulations on purchasing Winmate® E-Series HMI Display. Versatile display in an open-frame housing designed for panel mount and VESA mount solutions for industrial applications.

1.1 Features

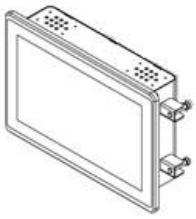
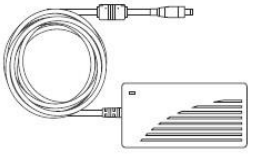
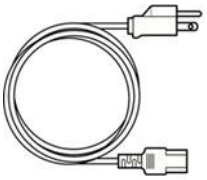
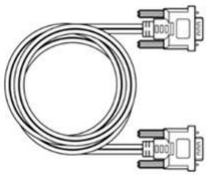
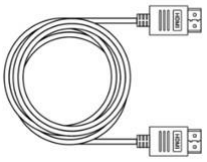
Winmate® Multi-Touch PCAP Panel Mount Display offers the following features:

- 7”,10.1”,15”,15.6”, & 21.5” TFT LCD
- Standard 1 x VGA (D-sub-15), 1 x HDMI (Type-A)
- Front IP65 water and dust proof
- Suitable for industrial applications

1.2 Package Contents

Carefully remove the box and unpack your device. Please check if all the items listed below are inside your package. If any of these items are missing or damaged contact us immediately.

Standard factory shipment list*:

			
HMI Device	**User Manual (Hardcopy)**	**AC Adapter (12V/ 50W)**	**Power Cord**
Varies by product specifications	Part No. 91521110104B	Part No. 922D050W12VA	*Varies by country*
			
Mounting Clips and Screws 7” HMI – 7 pcs 10.1” HMI – 7 pcs 15” HMI – 12 pcs 15.6” HMI – 10 pcs 21.5” HMI – 14 pcs	**VGA Cable**	**HDMI Cable**	
Part No. 82111E240400	Part No. 9441151150P4	Part No. 94E0190190P3	

**Package content may vary based on your order.*

1.3 Product Overview

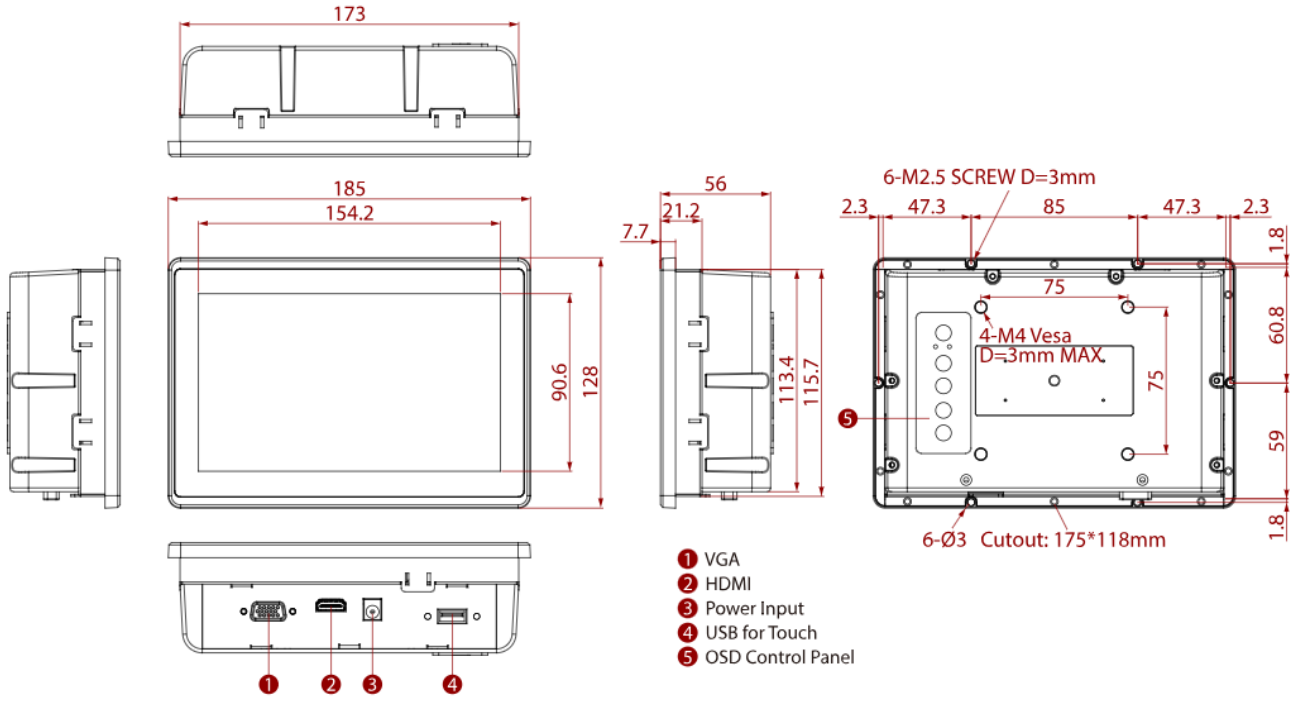
This section describes physical appearance of the Multi-Touch PCAP Panel Mount Display.

Note:
Notice that standard input terminals include VGA and HDMI. Your device may be equipped with other input terminals based on your order.

Note:
Notice that input and output connectors vary by product size and specifications. The picture above shows only a prototype model for information purposes only. The location of OSD panel may vary by model. Refer to a product datasheet for more details.

7-inches, W07L100-EHT1

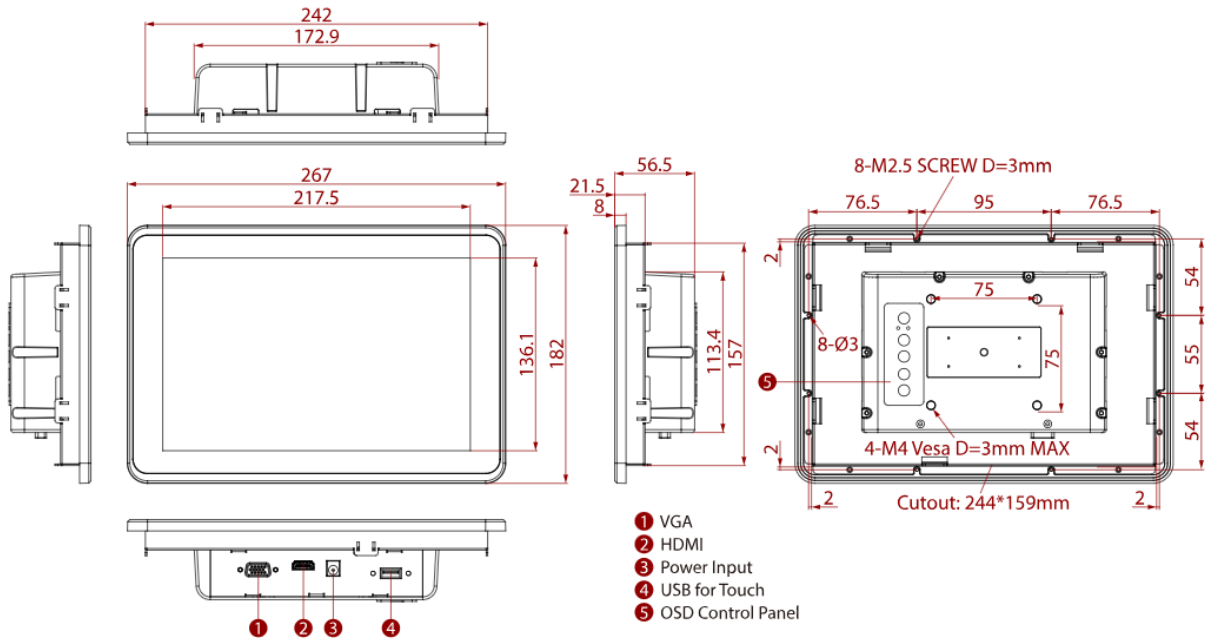
Unit: mm



№	Description	№	Description
1	VGA	4	USB for Touch
2	HDMI	5	OSD Control Panel
3	Power Input		

10.1-inches, W10L100-EHH2

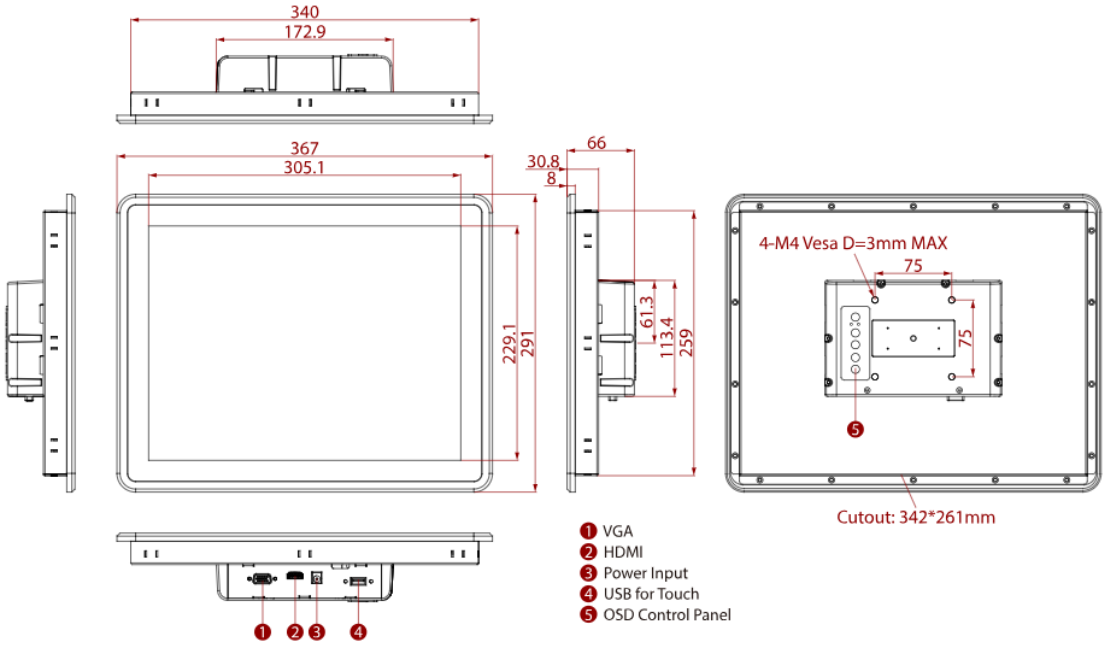
Unit: mm



№	Description	№	Description
1	VGA	4	USB for Touch
2	HDMI	5	OSD Control Panel
3	Power Input		

15-inches, R15L100-EHC3

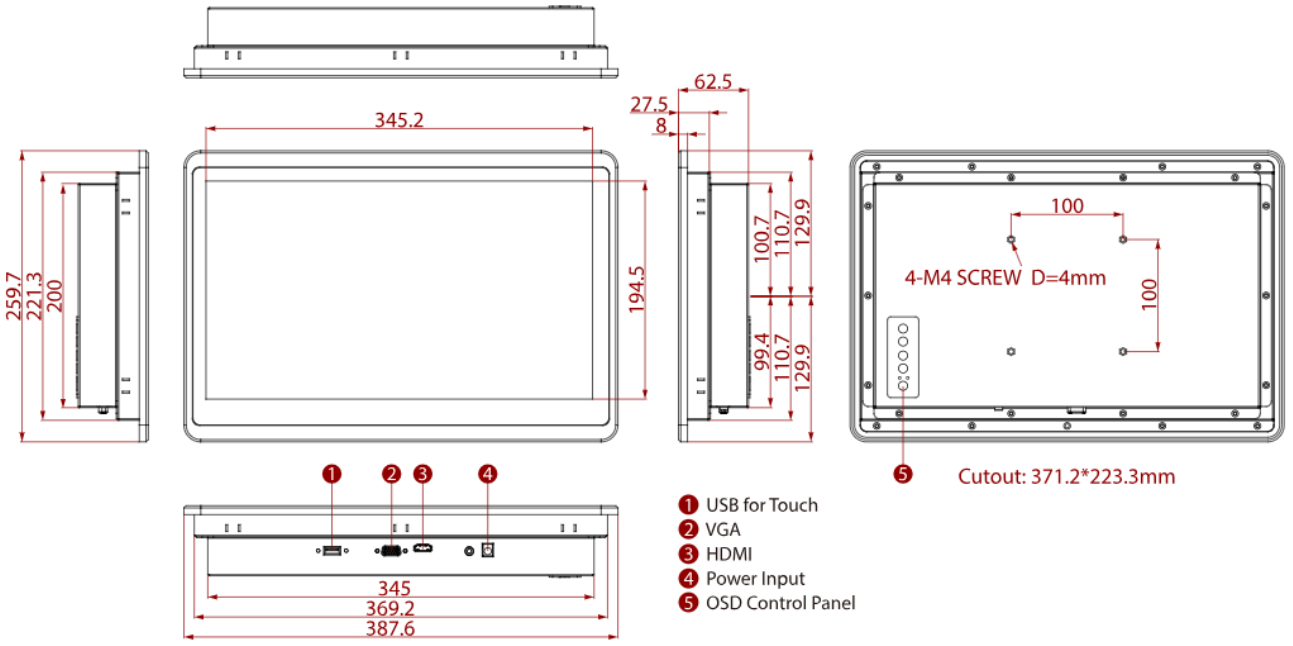
Unit: mm



№	Description	№	Description
1	VGA	4	USB for Touch
2	HDMI	5	OSD Control Panel
3	Power Input		

15.6-inches, W15L100-EHA4

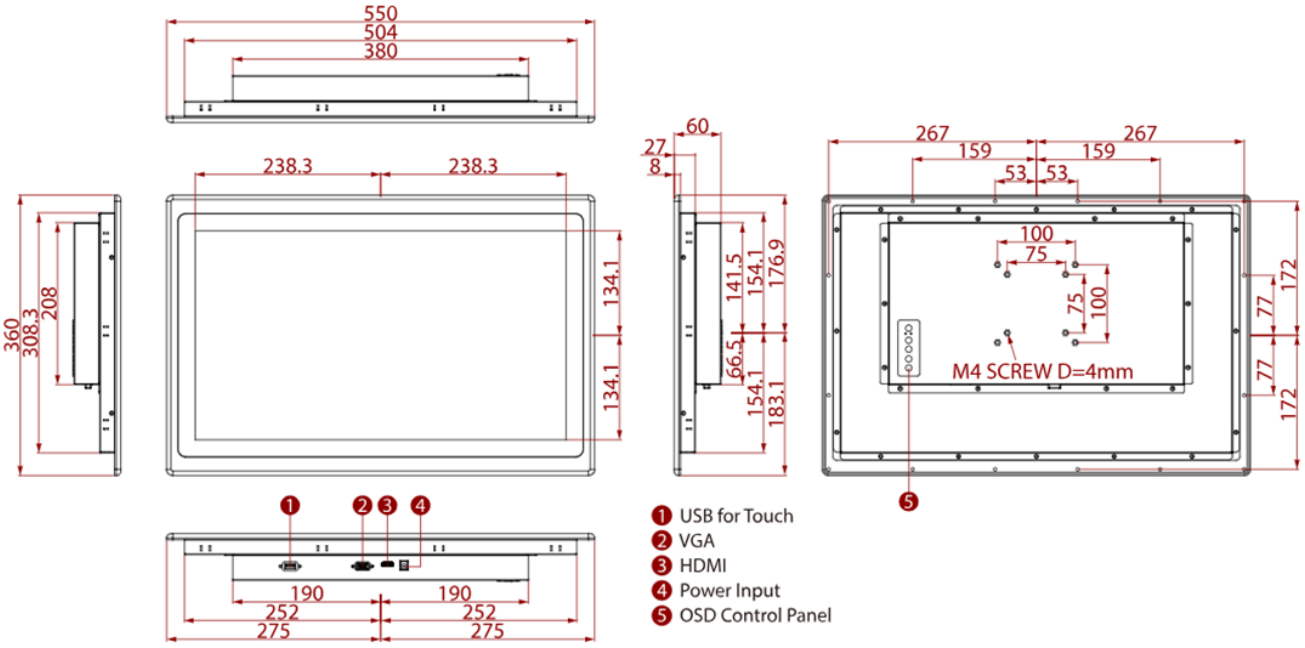
Unit: mm



№	Description	№	Description
1	USB for Touch	4	Power Input
2	VGA	5	OSD Control Panel
3	HDMI		

21.5-inches, W22L100-EHA3

Unit: mm



№	Description	№	Description
1	USB for Touch	4	Power Input
2	VGA	5	OSD Control Panel
3	HDMI		

1.4 Connector Description

This section describes the Input/Output Ports of the display.

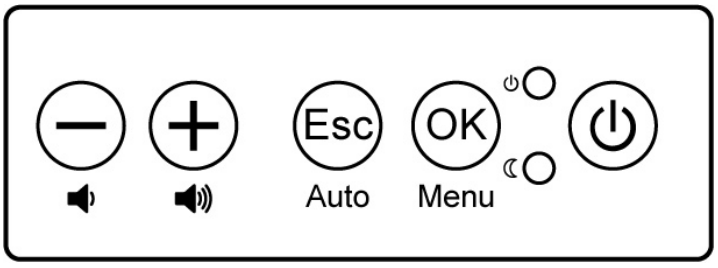
Note:
Notice that standard input terminals include VGA and HDMI. Your device may be equipped with other input terminals based on your order.

Notice that input and output connectors vary by product size and specifications.

Connectors are located on the bottom of the display.

Item	Description
	USB for Touch – Connects USB for touch capabilities. *Example: A touch to display.*
	VGA (RGB) –Transmits video from a PC to a monitor. *Example: A notebook PC to a monitor.*
	HDMI –Transmits and protects copyrighted digital video and audio. *Example: An HD tuner to an HD ready TV.*
	Power Jack – Connects computer to source of power.

1.5 OSD Control Panel



Icon	Function
−	Decrease the value / Select up
+	Increase the value / Select down
⏻	Power switch
Esc	Exit / Auto adjustment
OK	Enter / Call main OSD menu

1.6 LED Indicators

LED indicators are located in the OSD Control Panel on the rear side of the display.

Item	Description	Function
	Power Indicator	Lights up in "**Green**" when the monitor is on.
	Stand by Indicator	Lights up in "**Orange**" when the device cannot detect any input source.

Chapter 2: Hardware Installation

2.1 Wiring Requirements

The following common safety precautions should be observed before installing any electronic device:

- Strive to use separate, non-intersecting paths to route power and networking wires. If power wiring and device wiring paths must cross make sure the wires are perpendicular at the intersection point.
- Keep the wires separated according to interface. The rule of thumb is that wiring that shares similar electrical characteristics may be bundled together.
- Do not bundle input wiring with output wiring. Keep them separate.
- When necessary, it is strongly advised that you label wiring to all devices in the system.
- Do not run signal or communication wiring and power wiring in the same conduit. To avoid interference, wires with different signal characteristics (i.e., different interfaces) should be routed separately.
- Be sure to disconnect the power cord before installing and/or wiring your device.
- Verify the maximum possible current for each wire gauge, especially for the power cords. Observe all electrical codes dictating the maximum current allowable for each wire gauge.
- If the current goes above the maximum ratings, the wiring could overheat, causing serious damage to your equipment.

Be careful when handling the unit. When the unit is plugged in, the internal components generate a lot of heat which may leave the outer casing too hot to touch.

2.2 Mounting

The Panel Mount Display supports different installation methods, including panel mount, VESA mount. Refer to sub-sections below for more details.

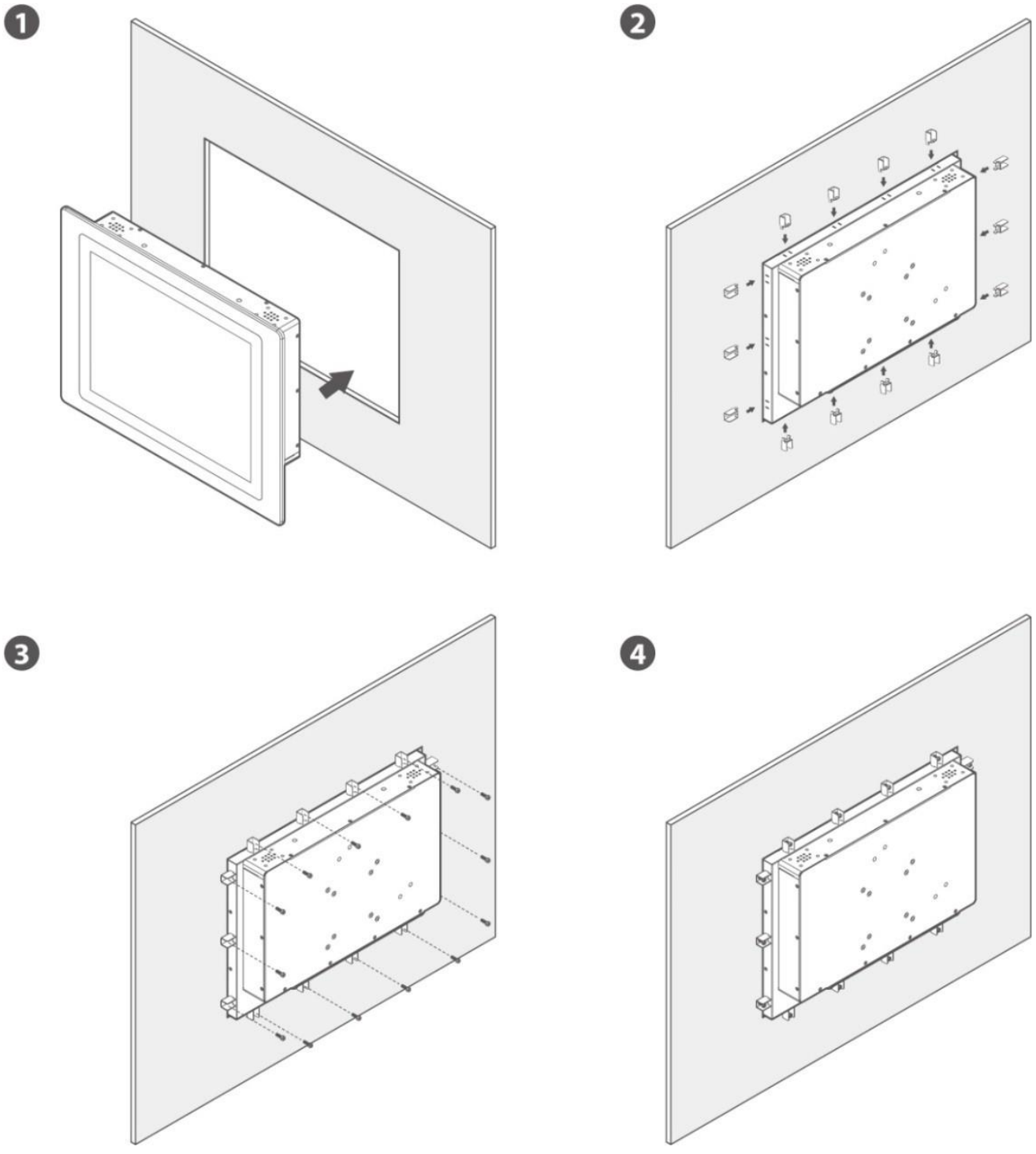
Caution Follow mounting instructions and use recommended mounting hardware to avoid the risk of injury.
Attention Suivez les instructions de montage et d'utilisation recommandé le matériel de montage pour éviter le risque de blessure.

2.2.1 Panel Mount

The E-Series Display comes with clamp mounts that enable you to install the unit onto a wall (where space has been cut out to accommodate the rest of the hardware).

Installation Instructions

1. Cut an opening in the fixture (e.g., wall) based on the display's cutout dimensions. Mark the screw holes on the front side of the fixture using the provided drawing. Position the display in the fixture from the rear side.
2. Secure the mounting clamps around the perimeter of the panel PC.
3. From the front side, use an electric screwdriver to tighten the M3 screws into the marked holes.
4. Once the display is secured, connect all necessary peripherals if required.

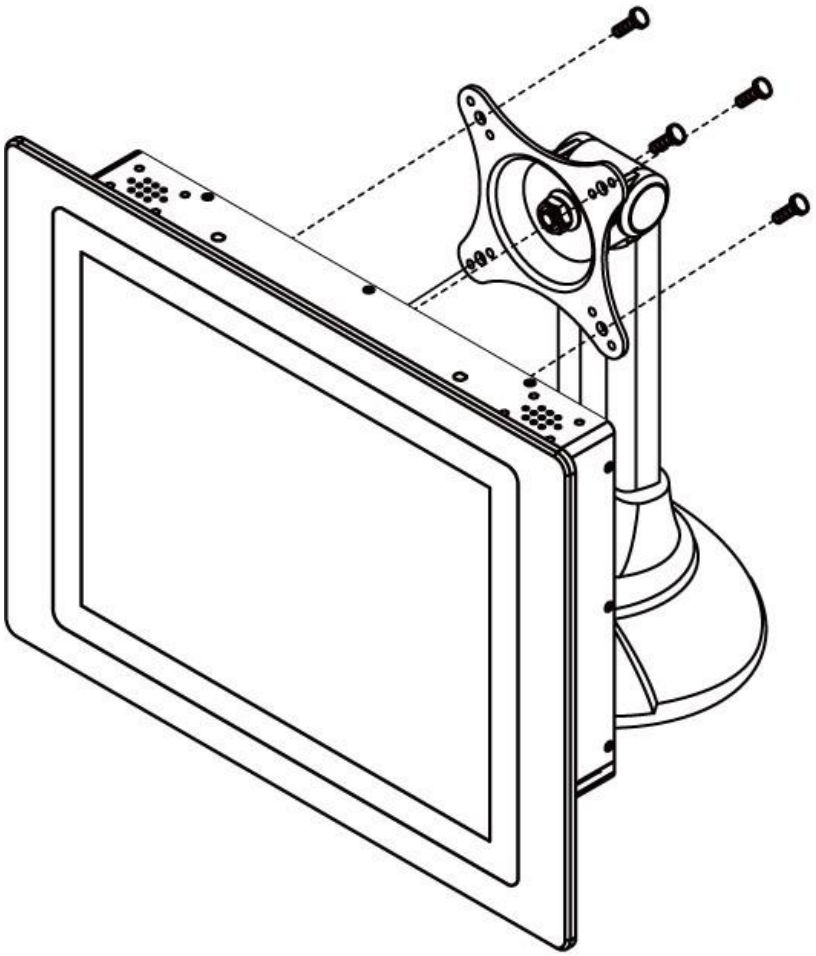


2.2.2 VESA Mount

Panel Mount Display comes with VESA holes for wall/ desk mounting. Notice that VESA stand and mounting kit are not provided by Winmate.

Installation Instructions

1. Secure the VESA bracket to the fixture (e.g., swing arm) using the four provided VESA screws.
2. Mount the device onto the VESA bracket.



2.3 Cable Mounting Considerations

For a clean appearance and secure installation, ensure all cables are neatly concealed behind the device.

Caution Observe all local installation requirements for connection cable type and protection level.
Attention Suivre tous les règlements locaux d'installations, de câblage et niveaux de protection.

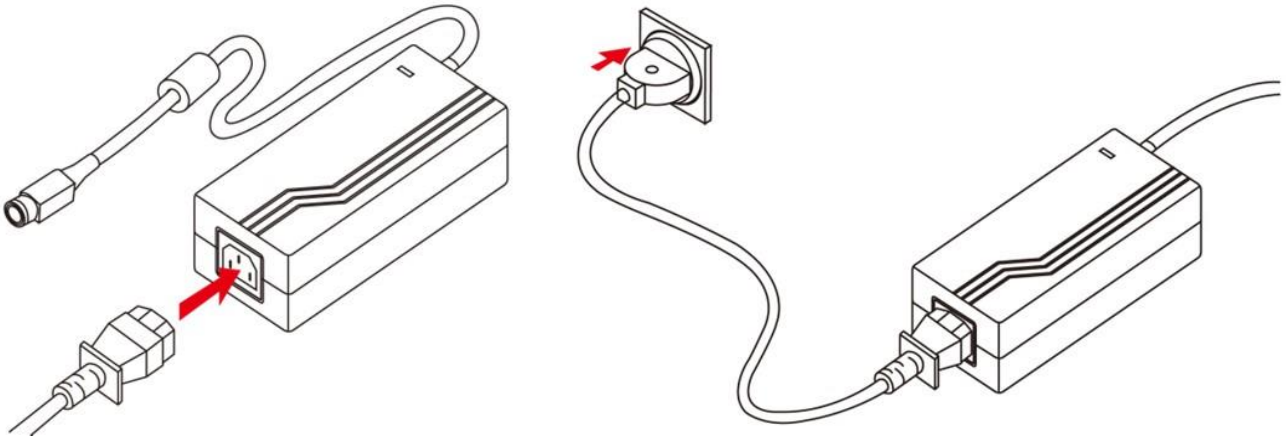
Caution Turn off the device and disconnect other peripherals before installation.
Attention Éteindre l'appareil et débrancher tous les périphériques avant l'installation.

2.4 Power Connection

This section provides information on how to use connectors on the Panel Mount Display. Be cautious while working with these modules. Please carefully read the content of this chapter in order to avoid any damages.

Installation Instructions

1. Connect the AC cord to the AC IN terminal on the AC adaptor.
2. Connect the DC OUT terminal of the AC adaptor to the DC IN terminal on the monitor.
3. Align the notch on the cord connector with the guiding groove, and plug it in.
4. Plug the AC cord into a power outlet to complete the connection.



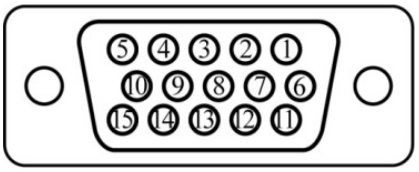
2.5 Connecting Peripherals

The panel control port is designed for monitors that work with a variety of compatible video sources. Due to the possible deviations between these signal sources, you may have to make adjustments to the monitor settings from the OSD menu when switching between these sources.

2.5.1 VGA Connector

Panel Mount Display uses standard 15pin D-sub connector. Plug 15-pin VGA signal cable to the VGA connector in the rear of motherboard, and plug the other end to the monitor. Secure cable connectors with hexagonal copper pillars M3x4mm.

Pin assignment and signal names for VGA connector

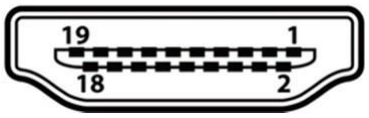


Pin №	Signal Name	Pin №	Signal Name
1	RED	2	GREEN
3	BLUE	4	NC
5	GND	6	AGND
7	AGND	8	AGND
9	VGA_5V	10	GND
11	NC	12	DDCSDA
13	H Sync	14	V Sync
15	DDCSCL		

2.5.2 HDMI Connector

Plug HDMI signal cable to the HDMI connector on the rear side of PC system, and plug the other end to the monitor.

Pin assignment and signal names for HDMI connector



Pin №	Signal Name	Pin №	Signal Name
1	HDMI_RX2+	2	GND
3	HDMI_RX2-	4	HDMI_RX1+
5	GND	6	HDMI_RX1-
7	HDMI_RX0+	8	GND
9	HDMI_RX0-	10	HDMI_RXC+
11	GND	12	HDMI_RXC-
13	HDMI_CON_CEC	14	NC
15	HDMI_CON_SCL	16	HDMI_CON_SDA
17	GND	18	+5V_HDMI
19	HDMI_CON_HP		

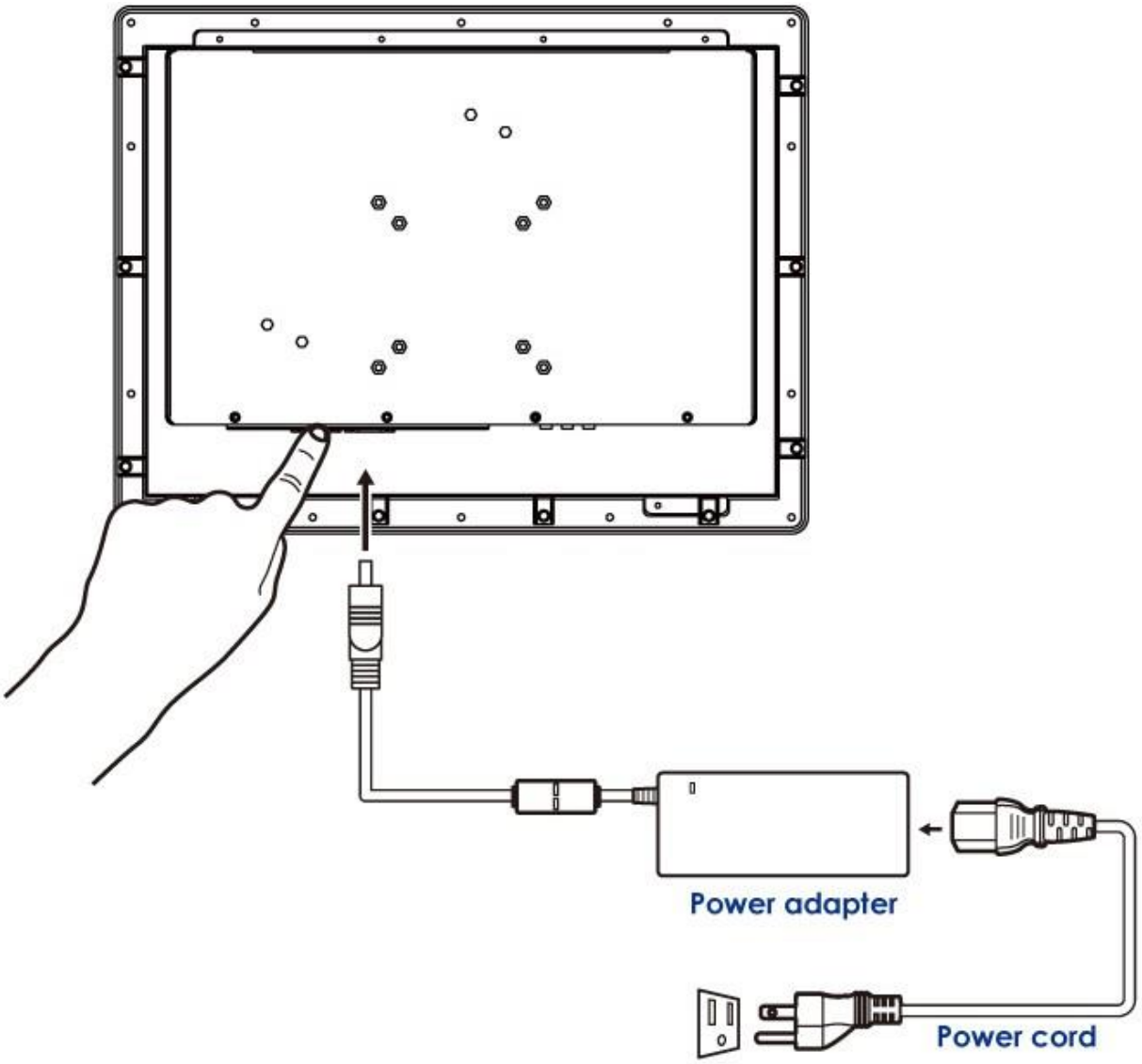
Chapter 3: Operating the Device

This chapter describes the instructions on how to operate the display.

3.1 Turning on the System

To turn on the system:

1. Connect the power adapter cable to the DC input of the display.
2. Connect the power cord to the power adapter.
3. Connect the power cord to a power outlet.
4. Press the power button located on the OSD control panel on the rear to turn on the system.



3.2 OSD Menu Navigation

OSD Icon	Sub-menu	Settings	Note
 BRICONTRAST	**BRIGHTNESS**	**Slider bar**	Default 50
	Use to adjust the screen's brightness. Range 0 to 100		
	CONTRAST	**Slider bar**	Default 50
	Use to adjust the screen's contrast. Range 0 to 100		
 POSITION	**H POSITION**	**Slider bar**	Default 50
	Use to adjust the image to the left or right on the screen. Range 0 to 100		
	V POSITION	**Slider bar**	Default 50
	Use to adjust the image up or down on the screen. Range 0 to 100		
 IMAGE	**AUTO**	**Select and execute**	
	Use to choose the best settings for the current input signal		
	CLOCK	**Slider bar**	
	Use to adjust the value of horizontal image. Range 0 to 100		
	PHASE	**Slider bar**	
	Use to adjust the phase control (Phase adjustment may be required to optimize the display quality)		
	WHITE BALANCE	**Select and execute**	
	Use to set RGB signal voltage level		
 COLOR	**USER**	**R.G.B slider bar**	Default 50
	Choose RED/GREEN/BLUE to set value of color temperature brightness to suit your own preference		
	9300K	**Select and execute**	
	Use to set value of monitor for the CIE coordinate 9300 color temperature		
	6500K	**Select and execute**	
	Use to set value of monitor for the CIE coordinate 6500 color temperature		
	ADC RIGHTNESS	**Slider bar**	Default 50
	Set value of monitor for ADC Brightness. Range 0 to 100		
XII GAMMA	**GAMMA 0**	**Select and execute**	Default GAMMA0
	Choose the parameter of GAMMA 0 as default setting.		
	GAMMA 1	**Select and execute**	
	Choose the parameter of GAMMA 1 as default setting.		
	GAMMA 2	**Select and execute**	
	Choose the parameter of GAMMA 2 as default setting.		
OP OPTION	**Volume**	**Slider bar**	Default 10
	Use to set value of Volume		
	Speaker	**ON/OFF**	Default OFF
	Use to set value of Volume Speaker		

OSD Icon	Sub-menu	Settings	Note
CHANNEL*	**AUTO SCAN**	**Select and execute**	Default mode
	Auto detect the input source		
	ANALOG	**Select and execute**	
	Switch the setting of signal input to Analog mode		
	HDMI	**Select and execute**	
	Switch the setting of signal input to HDMI mode		
RECALL	**YES**	**Select and execute**	
	Recall the factory default setting		
	NO	**Select and execute**	
	Return to main menu		
EXIT	**YES**	**Select and execute**	
	Exit the OSD menu		
	NO	**Select and execute**	
	Return to main menu		

***Note:** The channel setting may differ based on your order.

3.3 Troubleshooting Guide

If your monitor fails to operate correctly, check the following chart for possible solution before calling for repairs:

Condition	Check Point
The picture does not appear	• Check if the signal cable is firmly seated in the socket. • Check if the Power is ON at the computer • Check if the brightness control is at the appropriate position, not at the minimum.
The screen is not synchronized	• Check if the signal cable is firmly seated in the socket. • Check if the output level matches the input level of your computer. • Make sure the signal timings of the computer system are within the specification of the monitor. • If your computer was working with a CRT monitor, you should check the current signal timing and turn off your computer before you connect the VGA Cable to this monitor.
The position of the screen is not in the center	• Adjust the H-position, and V-position, or Perform the Auto adjustment.
The screen is too bright (or too dark)	• Check if the brightness or contrast control is at the appropriate position, not at the Maximum (Minimum).
The screen is shaking or waving	• Perform the Auto adjustment. • Moving all objects which emit a magnetic field such as motor or transformer, away from the monitor. • Check if the specific voltage is applied. • Check if the signal timing of the computer system is within the specification of monitor.

Note: If you are unable to correct the fault by using this chart, stop using your monitor and contact your distributor or dealer for further assistance.

Appendix

Appendix A: Resolution Table

V-VGA
D-DVI
H-HDMI

Resolution Support Table																																
Panel Size	**5.7", 6.5"**			**7"**			**8", 8.4", 12.1"**			**7", 10.1"**			**10.4", 12.1", 15"**			**10.1", 12.1"**			**17", 19"**			**15.6", 18.5"**			**20.1", 23.1"**			**15.6", 18.5", 21.5", 23.8", 27", 32", 42"**			**10.1", 24"**		
Panel Native Resolution	**640 x 480**			**800 x 480**			**800 x 600**			**1024 x 600**			**1024 x 768**			**1280 x 800**			**1280 x 1024**			**1366 x 768**			**1600 x 1200**			**1920 x 1080**			**1920 x 1200**		
Support Resolution	V	D	H	V	D	H	V	D	H	V	D	H	V	D	H	V	D	H	V	D	H	V	D	H	V	D	H	V	D	H	V	D	H
640x480 (4:3)	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
480P			V			V			V			V			V			V			V			V			V			V			V
800x480				V	V	V																											
800x600 (4:3)							V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
1024x768 (4:3)													V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
1280x720 (16:9) 720P			V			V			V			V			V			V			V	V	V	V			V	V	V	V	V	V	V
1280x768																						V	V	V									
1280x800 (16:10)																V	V	V										V	V	V	V	V	V
1280x1024 (5:4)																			V	V	V				V	V	V	V	V	V	V	V	V
1366x768																						V	V	V									
1400x1050 (4:3)																									V	V	V						
1440x900 (16:10)																												V	V	V	V	V	V
1600x1200 (4:3)																									V	V	V						
1680x1050 (16:10)																												V	V	V	V	V	V
1920x1080 (16:9)1080P			V			V			V			V			V			V			V			V			V	V	V	V	V	V	V
1920x1200 (16:10)																															V	V	V

Appendix B: Frequency Table

Frequency Table				
Resolution	**Vertical Frequency**	**V**	**D**	**H**
640x480 (4:3)	60	V	V	V
	72	V		
	75	V		
480P	60	V	V	V
800x480	60	V	V	V
800x600 (4:3)	60	V	V	V
	72	V		
	75	V		
1024x768 (4:3)	60	V	V	V
	75	V		
1280x720 (16:9) 720P	60	V	V	V
1280x768	60	V	V	V
1280x800 (16:10)	60	V	V	V
1280x1024 (5:4)	60	V	V	V
	75	V		
1366x768	60	V	V	V
1400x1050 (4:3)	60	V	V	V
1440x900 (16:10)	60	V	V	V
1600x1200 (4:3)	60	V	V	V
1680x1050 (16:10)	60	V	V	V
1920x1080 (16:9)	60	V	V	V
1920x1200 (16:10)	60	V	V	V

Notes

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