Avalue Intelligent Display & System

HID-2100

21.5" Touchscreen Monitor

User Manual

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Instructions for the User

The document combines text and illustrations, providing a comprehensive overview of the system. The information is presented as a sequential steps of actions, allowing the user to learn directly how to use the device. The text provides explanations and instructs the user step-by-step in the practical use of the product, with short, clear instructions in an easy-to-follow sequence.

- Non-patient at least 18 years old with basic reading experience.
- Read and understand "westernized Arabic numbers" when written in Arial font
- Can distinguish human organs and understand hygiene.
- Understand languages as specified in the marketing plan (Ext: Chinese, English….).
- For general function operation and maintenance, no special experiences are required.
- Mechanical tool operation knowledge is needed when installing mounting. Please contact a service technician or your retailer.

Purposes and Applications

HID-2100 is intended to be used in healthcare institutions for general purpose as an assisting device for data access – patient information, records, media services, and so on. The product is designed for general or special use in the hospital environment.

Operating principle

A touch monitor has four main components: the arithmetic logic unit (ALU), the control unit, the memory, and the input and output devices (collectively termed I/O). These parts are interconnected by buses, often made of groups of wires.
The control unit, ALU, and registers are collectively known as a central processing unit (CPU). Inside each of these parts are thousands to trillions of small electrical circuits which can be turned off or on by means of an electronic switch. Each circuit represents a bit (binary digit) of information so that when the circuit is on it represents a "1", and when off it represents a "0" (in positive logic representation). The circuits are arranged in logic gates so that one or more of the circuits may control the state of one or more of the other circuits.

Definitions

Warning! A WARNING statement provides important information about a potentially hazardous situation which, if not avoided, could result in death or serious injury.

Caution! A CAUTION statement provides important information about a potentially hazardous situation which, if not avoided, may result in minor or moderate injury to the user or patient or in damage to the equipment or other property.

Note! A NOTE provides additional information intended to avoid inconveniences during operation.

Safety Instructions

1. Strictly follow these Instructions for Use, please read these safety instructions carefully.

2. Remind to keep this User's Manual for later reference, and any use of the product requires full understanding and strict observation of all portions of these instructions. Observe all WARNINGS and CAUTIONS as rendered throughout this manual and on labels on the equipment.

3. Repair of the device may also only be carried out by MANUFACTURER.

Warning! Because of the danger of electric shock, never remove the cover of a device while it is in operation or connected to a power outlet.

4. If one of the following situations arises, please refer to the solutions:

Problem	Solution
The power cord or plug is damaged.	Contact manufacturer for further inspection.
Liquid has penetrated equipment.	Try to dry up excess liquid and contact manufacturer for further inspection.
The equipment does not power on.	1. Check the adapter model to see if it is correct. 2. Confirm whether power adapter and power cord is properly connected. 3. If the problem still exists, contact manufacturer for further inspection.
The equipment has been damaged.	1. Power on the equipment to confirm whether the function is still normal. 2. Contact manufacturer for repairment if needed.

5. Disconnect this equipment from any AC outlet before cleaning. Use a damp cloth. Do not use liquid or spray detergents for cleaning and keep this equipment away from humidity.

Caution! *To avoid short-circuiting and otherwise damaging the device, do not allow fluids to come in contact with the device. If fluids are accidentally spilled on the equipment, remove the affected unit from service as soon as possible and contact the service personnel to verify that patient safety is not compromised.*

6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall may cause damage. For plug-in equipment, the power outlet socket must be located near the equipment and must be easily accessible.

Caution! *To prevent overheating, do not cover the openings and place the device in direct sunlight or near radiant heaters.*

7. 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. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient over voltage.

Caution! *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). this may damage the equipment.*

8. If your computer is losing dramatic time or the BIOS configuration reset to default, the battery has no power.

Caution! *Do not replace battery yourself. Please contact* MANUFACTURER*. The computer is provided with a battery-powered real-time clock circuit. There is a danger of explosion if battery is incorrectly replaced. Replace only with same or equivalent type recommended by the manufacture. Discard used batteries according to the manufacturer's instructions*

9. Improper installation of VESA mounting can result in serious personal injury! VESA mount installation should be operated by professional technician, please contact the service technician or your retail if you need this service.

10. Environmental protection: follow national requirements to dispose of unit.

11. Maintenance: to properly maintain and clean the surfaces, use only the approved products or clean with a dry applicator.

Caution! *Use suitable mounting apparatus to avoid risk of injury.*

15. Use a power cord that matches the voltage of the power outlet, which has been approved and complies with the safety standard of your country.

Note! *Environmental protection Follow national requirements to dispose of unit.*

Warning! *Do not modify this equipment without authorization of the manufacturer.*

Warning! *To avoid risk of electric shock, this equipment must only be connected to a supply main with protective earth.*

16. The design of Internal Smart battery is considered for backup purpose while system accidently loosing main power supply in any situation, it will supply max.6mins of the operating time to keep let user backup the data and shut down the system properly.

Caution! *Do not attempt to disassemble the battery pack. There is danger of excessive temperatures, fire or explosion if the battery is incorrectly replaced. Please contact with MANUFACTURER to replace battery packs.*

Caution! *Do not use the power adapter that isn't made for the equipment, supplying the equipment with inappropriate voltage may cause harm to the battery (if any) or even worse burn the equipment.*

17. The product is not used in Category AP or Category APG in an anesthetic gas environment.

Explanation of Graphical Symbols

⚠️	Warning: dangerous voltage
⚠️	Caution
📄	Note
🔵	ISO 7000-1641: Follow operating instructions or Consult instructions for use.
⎓	Direct current.
⏚	Equipotential
⏻	Stand-by
FC	US Conformance
🗑	Follow the national requirements for disposal of equipment.

Disposing of your old product

Within the European Union

EU-wide legislation, as implemented in each Member State, requires that waste electrical and electronic products carrying the mark (left) must be disposed of separately from normal household waste. This includes monitors and electrical accessories, such as signal cables or power cords. When you need to dispose of your display products, please follow the guidance of your local authority, or ask the shop where you purchased the product, or if applicable, follow any agreements made between yourself. The mark on electrical and electronic products only applies to the current European Union Member States.

Federal Communication Commission Interference Statement

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of 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 instruction, 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 the one the receiver is

connected to.

• **Consult the dealer or an experienced radio/TV technician for help.**

Notice:

(1) A Unshielded-type power cord is required in order to meet FCC emission limits and also to prevent interference to the nearby radio and television reception. It is essential that only the supplied power cord by used.

(2) Use only shielded cables to connect I/O devices to this equipment.

(3) Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC RF Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body. For product available in the USA/Canada market, only channel 1~11 can be operated. Selection of other channels is not possible. The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. Shielded interface cables must be used in order to comply with emission limits.

Additional Information and Assistance

Contact your distributor, sales representative 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
- This equipment is a source of electromagnetic waves. Before use please, make sure that there are not EMI sensitive devices in its surrounding which may malfunction therefore.

Environmental protection

- Follow national requirements to dispose of unit.

Manufacturer

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CONTENT

1. HID-2100 Multi Touch Monitor Features

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In this chapter, you will get to know all features of our HID-2100 Multi Touch Monitor.

1.1 Packing List

- 1 x HID-2100 Touch Monitor
- 1 x power adapter
- 1 x VGA cable (optional)
- 1 x HDMI cable (optional)
- 1 x DP cable (optional)
- 1 x USB cable (optional)

Power cords:

● Utilize a UL-listed detachable power cord, 3-wire, type SJ or equivalent, 18 AWG min., rated 250 Vmin., provided with a hospital-grade type plug 5-15P configuration for 120V application, or 6-15P for 240V application.

● Do not overload wall outlets and extension cords as this may result in fire or electric shock.

● Mains lead protection (U.S.: Power cord): Power cords should be routed so that they are not likely to be walked upon or pinched by items placed upon or against them, paying particular attention to cords at plugs and receptacles.

● The power supply cord should be replaced by the designated operator only at all time.

●Use a power cord that matches the voltage of the power outlet, which has been approved and complies with the safety standard of your particular country.

1.2 Specifications

Component	
AD Board	HID-2100 AD Board
Chipset	RTD2525A
USB Hub IC	Genesis GL850GHHY60
Adapter	24V/5A 120W Adapter
System Fan	Fan-less
Speaker	2W x 2
Display	
LCD Panel	AUO G215HAN01.3
LED Driving Board	DB-LDA001-4-060
Viewable Area (IN.)	21.5"
Resolution	1920 x 1080
Viewing Angle	89/89/89/89
Number of Colors	16.7M
Brightness (typical)	250 cd/m2 (Typ.) for AUO G215HAN01.3
Response Time-total (typical)	22 msec for AUO
Contrast Ratio	1000 (Typ.)
Touch Screen	PCAP 10 Points Touch
Touch Controller	EETI EXC84H5680
Touch Interface	USB
Surface Treatment	Anti-glare (Optional)
Touch Disable	Touch Disable Feature
On-Screen Display Button	OSD Buttons on right bottom side of touchscreen.
On Screen Display	Accessible through switches along the bottom: ● Controls: Menu, Up, Down, Select

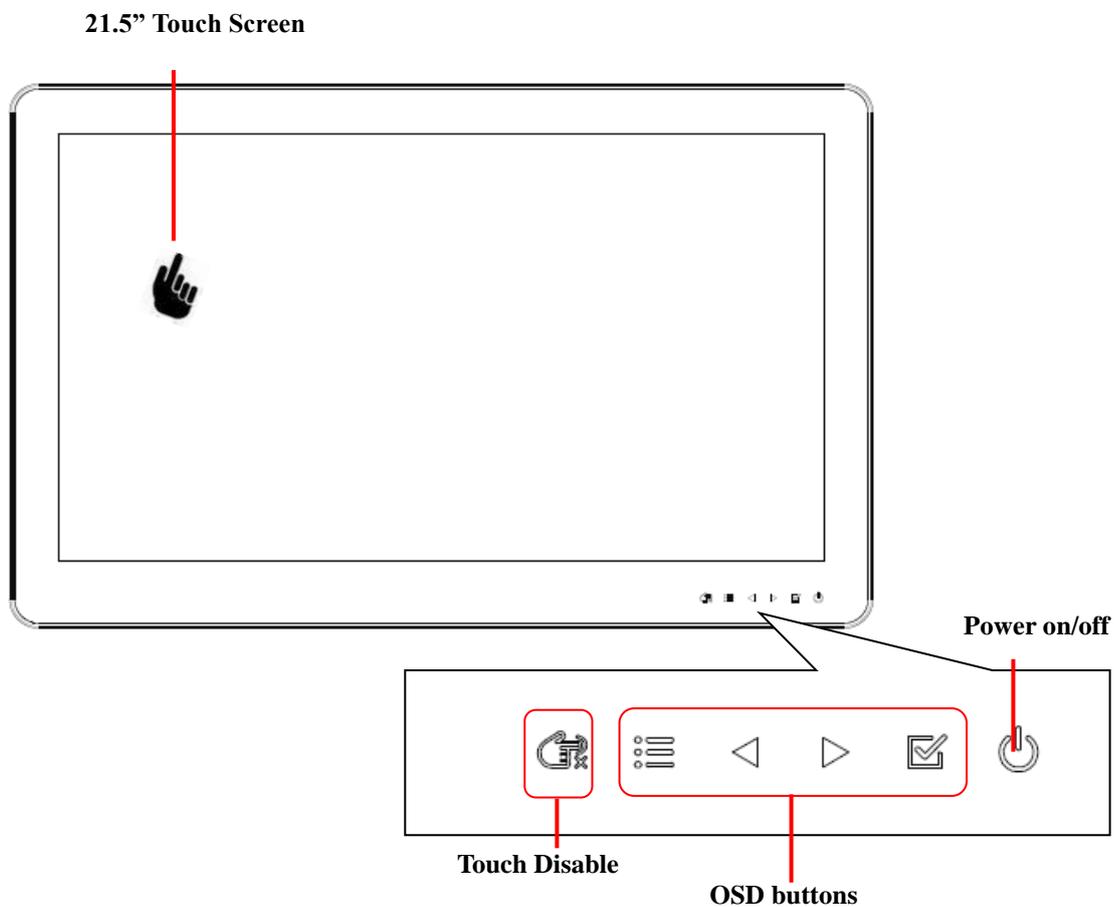| OSD Content	- Settings: Brightness, Contrast, Clock, Phase, H-position, V-position, Auto-Adjust, Sharpness, Color Temperature, OSD Timeout, OSD Language, Volume, Mute, Recall Defaults, Audio Select, Power LED ON/OFF, Touch Thru, Touch Interface, DICOM - Languages: English, French, Italian, German, Spanish, Japanese, Traditional Chinese, Simplified Chinese, Russian, Korean - Lockouts: OSD, Power
Input Video Format	FHD
Input Video Frequency	60Hz
External I/O	
VGA Port	1
HDMI	HDMI IN x 1
Upstream USB	Type B x 1 (Upstream Port for PC connection)
USB Port	Type 2.0 A x 2 (Downstream Port for USB device ex. Keyboard/ mouse)
Display Port	1 x DP
Audio Port	Line in (Green) Line out (Black) With auto detect headphone feature
Mechanical	
Power Connector Type	DC jack (screw type)
Power Consumption (Typical)	40W
Input Voltage	24V 120W
Output Voltage	24V 30W
Dimension	539.6 x 342.6 x 45.2 mm
Weight	6 kg
Color	White
Mounting Options	VESA 4-hole 75mm/ 100mm mounting interface on rear Optional Wall Mount Kit (75mm or 100mm VESA) Optional Desk Stand (75mm or 100mm VESA)
Warranty	2 Years (Standard)
Reliability	
Certification	CE FCC Class B

Dust and Rain Test	Front IP65
Vibration Test	Random Vibration Operation Reference IEC60068-2-64 Testing procedures Test Fh : Vibration boardband random Test 1 Test PSD : 0.00454G²/Hz , 1.5 Grms 2 Test frequency : 5~500 Hz 3 Test axis : X,Y and Z axis 4 Test time : 30 minutes each axis 5 System condition : operation mode 6 Test curve Sine Vibration Test Reference IEC60068-2-6 Testing procedures Test Fc : Vibration sinusoidal 1 Test Acceleration : 2G 2 Test frequency : 5~500 Hz 3 Sweep：1 Oct/ per one minute. (logarithmic) 4 Test axis : X,Y and Z axis 5 Test time :30 min. each axis 6 System condition : Non-Operating mode 7 Test curve Package Vibration Test: Reference IEC60068-2-64 Testing procedures Test Fh : Vibration boardband random Test 1 Test PSD : 0.026G²/Hz , 2.16 Grms 2 Test frequency : 5~500 Hz 3 Test axis : X,Y and Z axis 4 Test time : 30 minutes each axis

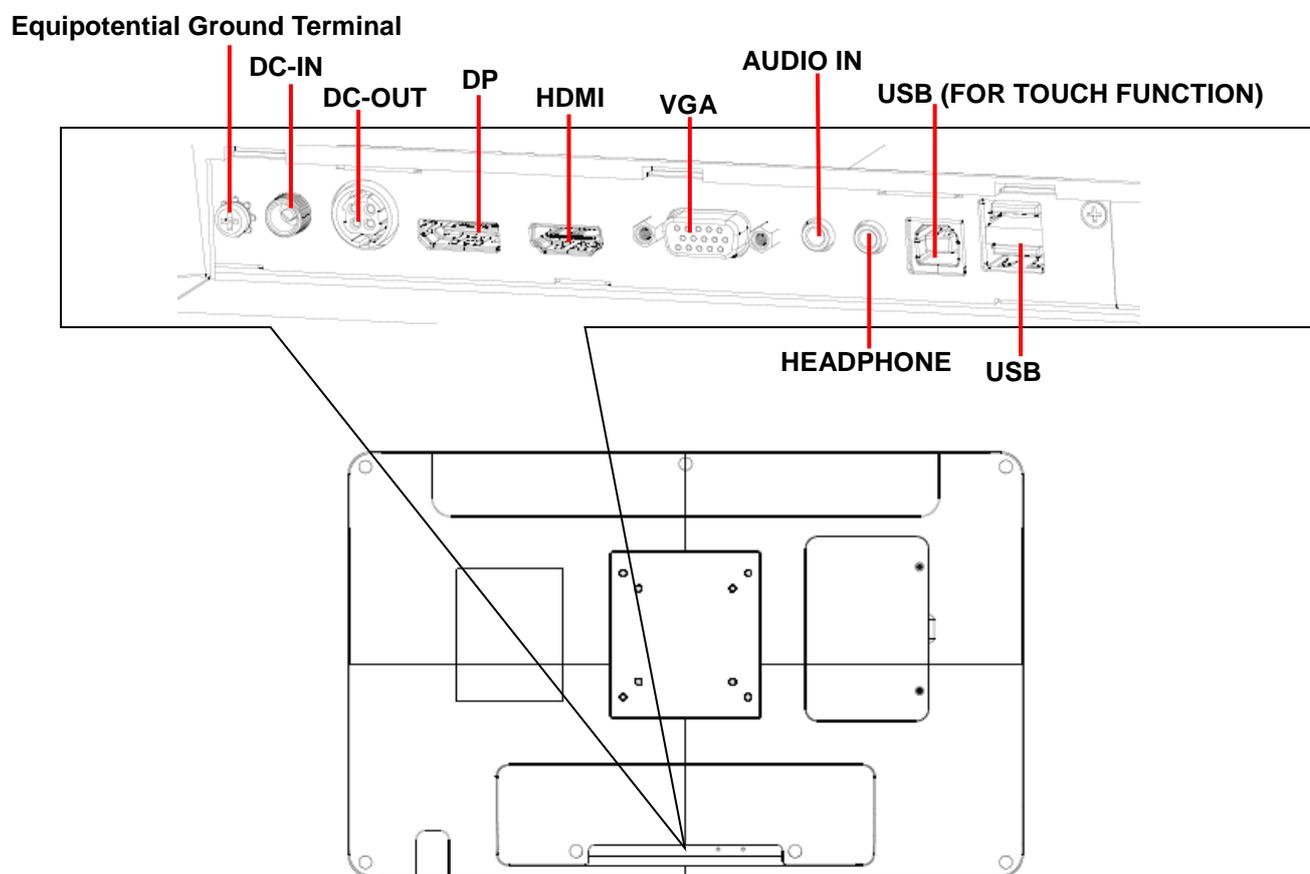|	
	5 Test curve
Mechanical Shock Test	10Grms, IEC 60068-2-27, Half Sine, 11ms
Drop Test	Package drop test Reference ISTA 2A, Method : IEC-60068-2-32 Test:Ed Test Ea : Drop Test 1 Test phase : One corner, three edges, six faces 2 Test high : 3 Package weight : 4 Test drawing
Operating Temperature	0°C ~ 40°C (32°F ~ 104°F)
Operating Humidity	40°C @ 95% Relative Humidity, Non-condensing
Storage Temperature	-10°C ~ 60°C (14°F ~ 140°F)

Note: Specifications are subject to change without notice.

1.3 Front view

21.5" Touch Screen

Power on/off

Touch Disable

OSD buttons

Button	Function when OSD is not displayed	Function when OSD is displayed
☰	Display OSD Main menu	Return to previous OSD menu
◀	Display OSD Contrast submenu	Decrease value of selected parameter/select previous menu item
▶	Display OSD Brightness submenu	Increase value of selected parameter/select next menu item
☑	Display Video Priority submenu	Select parameter for adjustment/select submenu to enter
⏻	Power key	Power on/off display

1.4 Rear & Bottom view

I/O port functions description:

Equipotential Ground Terminal: for connect hospital ground/earth

DC-IN/DC-OUT: for Power adapter DC jack

DP: DP connector

HDMI: HDMI connector

VGA: VGA connector
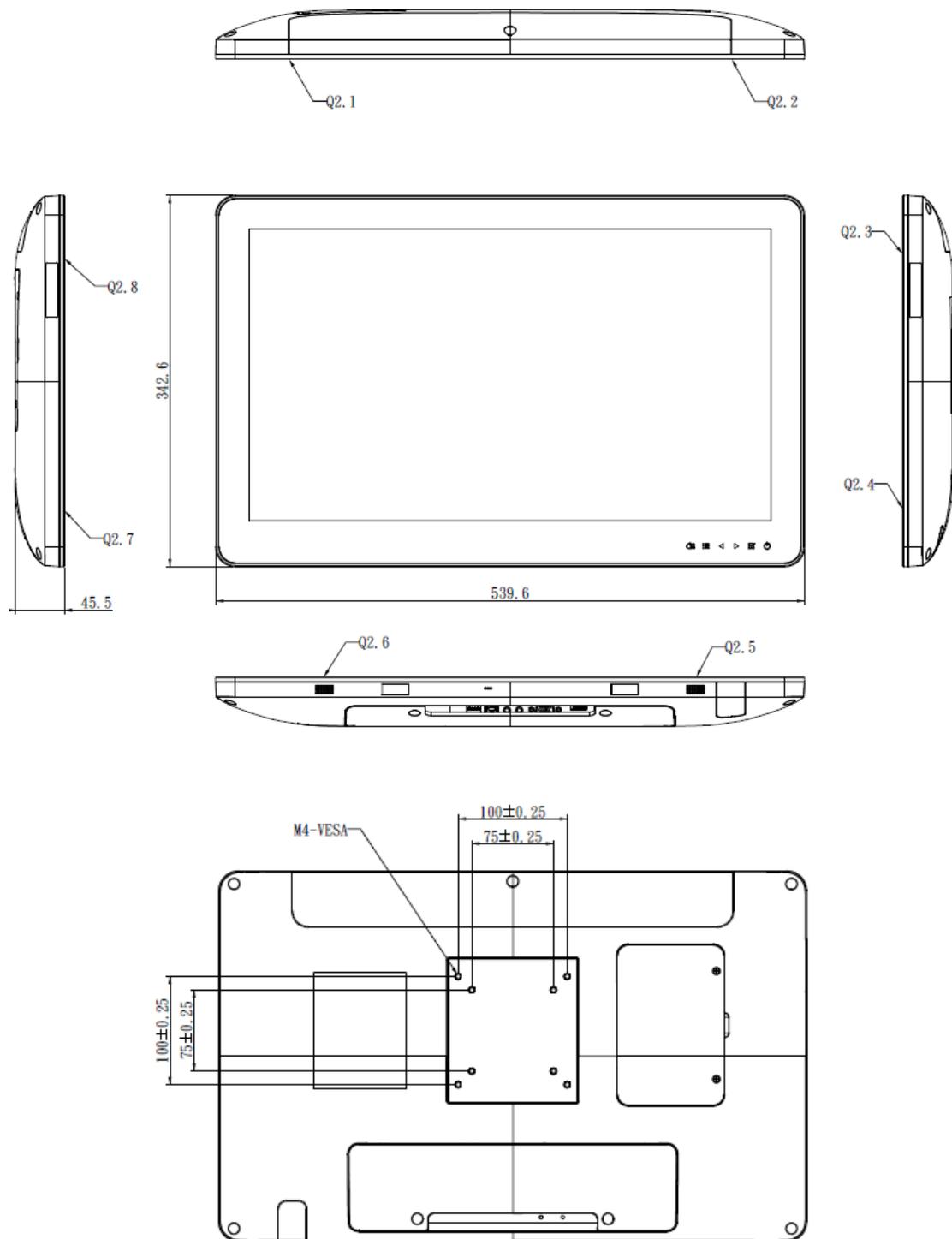
AUDIO IN: Audio output

HEADPHONE: Audio input

USB (FOR TOUCH FUNCTION): USB Type B 2.0 port

USB: Dual stack USB 2.0 Type A port x 2

Note! *Equipotential terminal needs to be linked to the hospital ground/earth*
system before booting the system to protect both operator and system.

1.5 System Dimensions

Unit: mm

2. Setting Up HID-2100 Multi Touch Monitor

This chapter gives instructions on how to set up HID-2100 Multi Touch Monitor and how to connect different cables.

2.1 VESA Mounting
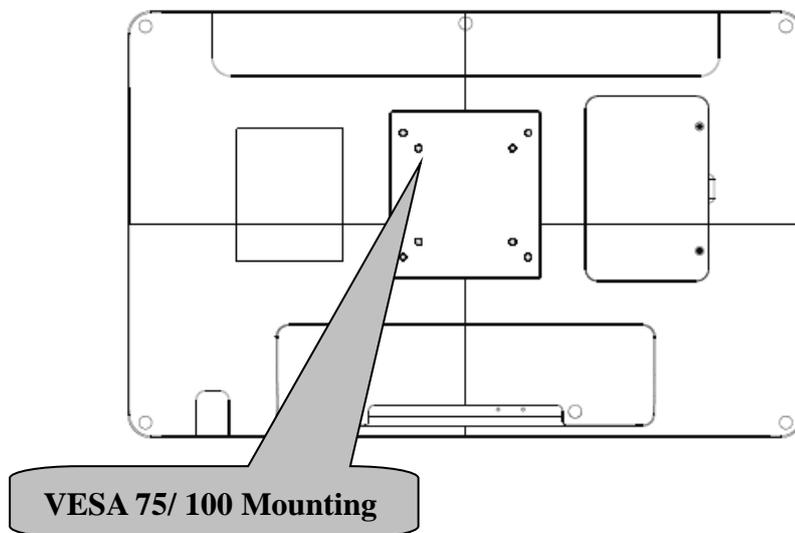2.2 Cleaning and Disinfecting

2.1 VESA Mounting

The HID-2100 also provides standard VESA mounting to help system integrators conveniently integrate the touch monitor into their system.

Never use mounting brackets except as provided by Avalue to prevent unreliable mounting of the HID-2100. VESA mount installation should be carried out by a professional technician; please contact a service technician or your retailer if you need this service.
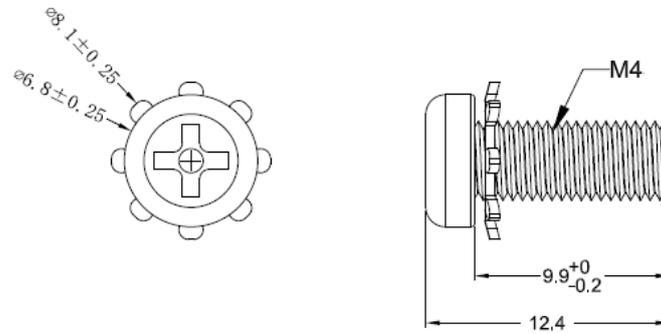
Installation instructions follow:

1. First attach the wall-mounting to the heat-sink of the HID-2100, securing it in place with four of the M4 x 6mm screws provided.

2. Mount the on the wall, stand or other flat surface.

Warning!   *Be sure to secure the screws of the mounting bracket tightly. A loose joint between the HID-2100 and mounting bracket may create danger of injury.*

VESA 75/ 100 Mounting

Suggested Screw type for mounting

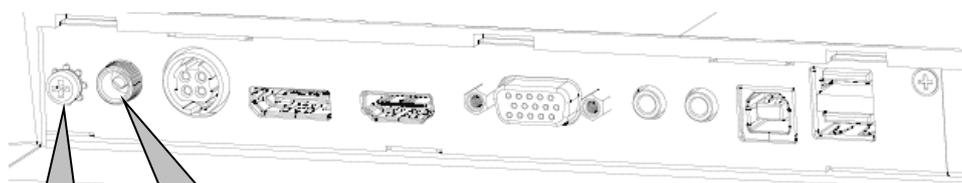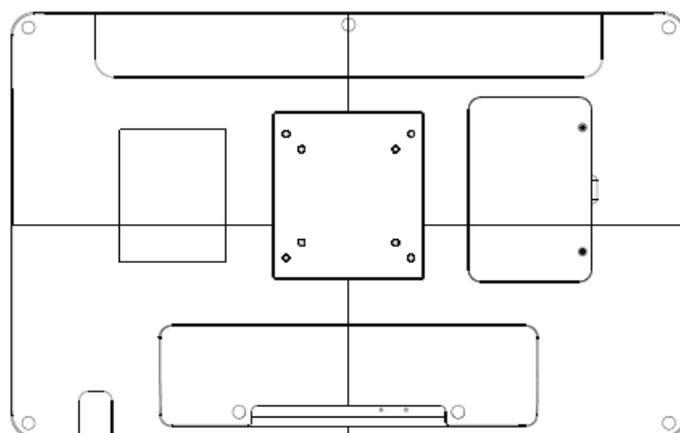**Note:** 4 pieces of M4 x 6mm screws (P/N: E1933050611R)

Warning! Use suitable mounting apparatus to avoid risk of injury.

2.2 Cabling

1. Power Cable
2. Equipotential Terminal Pin

Equipotential Terminal Pin

Power Jack

Follow below step Connecting the Ground pin

1. With system ready, find the equipotential terminal on the rear side of the HID-2100. An equipotential terminal is provided to optionally connect to a hospital ground/earth system.
2. Prepare grounding cable and the other terminal links to the hospital ground/ earth system.
3. Grounding cable plug with Equipotential Terminal

Please follow below steps to connect power cable to system.

The HID-2100 could only be powered by a DC power adapter (EDAC Model no. EDAC EM11011M(18)). Be sure to always handle the power cords by holding the plug ends

only.

Follow these procedures in order:

1. Connect the female end of the power adapter to the DC jack of the touch monitor.

2. Connect the female end of the power cord to the DC power adapter.

3. Connect the 3-pin male plug of the power cord to an electrical outlet.

2.3 Cleaning and Disinfecting

During normal use of HID-2100, the device may become dirty and should be regularly cleaned.

Cleaning Instructions

1. Turn off the computer before starting clean up. This way, you can see any dirt on the screen; the brightness of the monitor may make you miss some areas.

2. Wet a soft, lint-free or microfiber cloth with cleaning agent per manufacturer's instructions or hospital protocol. Wipe the PC in a gentle motion to remove dust, oil, or fingerprint smudges.

3. Wipe any moisture excess with a dry lint-free cloth to finish cleaning before turning the computer back on.

Cleaning Tools

Below is a list of some items that may be needed or used when cleaning the PC or PC peripherals.

Please keep in mind that some components in PC components may only be cleaned using a product designed for cleaning that component.

Cleaning agent list: chemical disinfectants which have been tested on the PC

No. Cleaning agent

1. Water

2. Alcohol
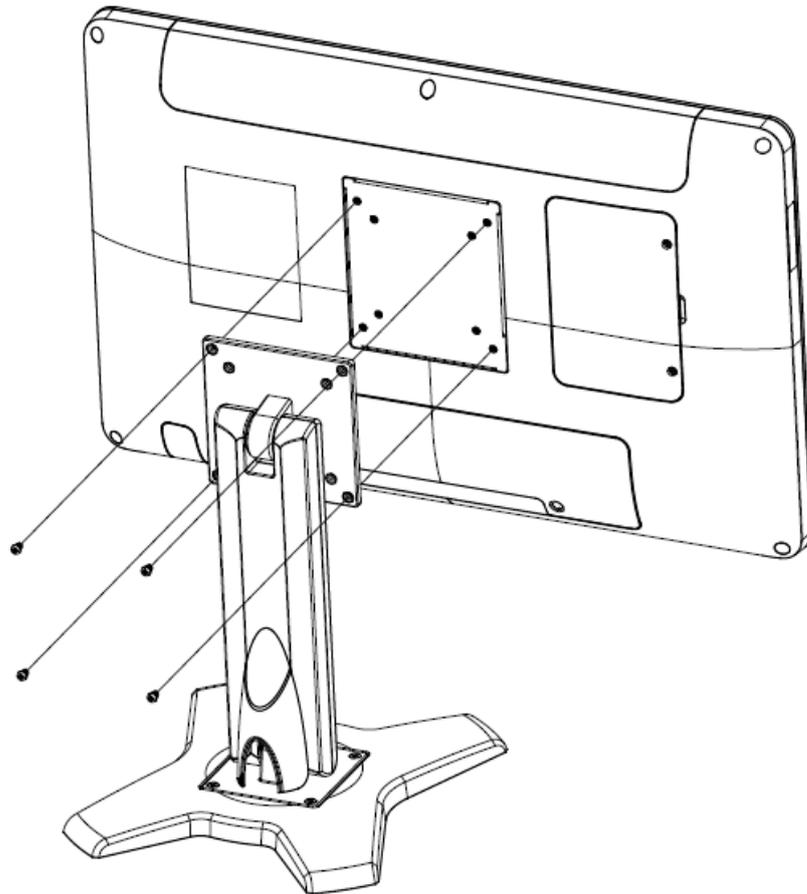
3. Alcohol 75%

Caution!

- *Do not immerse or rinse the HID-2100 or its peripherals. If you accidentally spill liquid on the device, disconnect the unit from the power source. Contact your Biomed Department regarding the continued safety of the unit before placing it back in operation.*
- *Do not spray cleaning agent on the chassis.*
- *Do not use disinfectants that contain phenol. Do not autoclave or clean the HID-2100 or its peripherals with strong aromatic, chlorinated, ketone, ether, or Esther solvents, sharp tools or abrasives. Never immerse electrical connectors in water or other liquids.*

3. HID-2100 Installation Figure

3.1 Desktop Stand installation

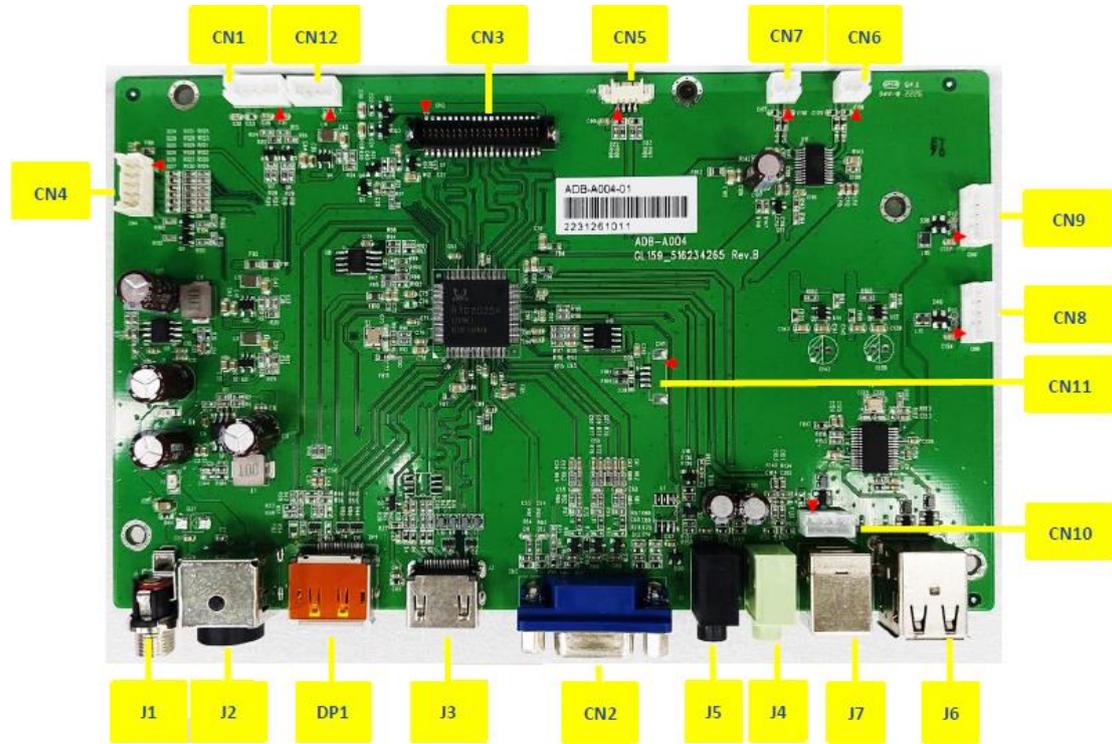**Step1.** Position VESA Mount on both sides, matching the holes on the system.
Step2. Insert and fasten 4 screws on each side of the monitor to secure Mounting brackets.

4. Hardware Configuration

4.1 AD Board Specifications

Component	
Model	ADB-A004
Panel Interface	Single/Dual LVDS
Maximum Resolution	Up to WXGA 1920 x 1200 8 bits per color, total 16.7M colors
Vertical Refresh Rate	VGA，SVGA，XGA，UXGA VESA Standard up to 75Hz WUXGA up to 60Hz (No FRC Function)
Input Source	VGA Analog (15pin D-Sub) HDMI 1.4a (HDCP 1.4) Display Port 1.2 (HDCP1.4)
Audio Output	2W+2W at 4 Ohm speaker
Dot Clock Maximum (Pixel clock)	VGA：210 MHz HDMI/DP：165 MHz

4.2 AD Board Overviews

4.3 AD Board Function

J1: Input DC power Jack 2.5Ø

J2: Output DC power port (miniDIN)

J3: HDMI input

J4: Audio input

J5: Audio output

J6: Dual stack USB 2.0 Type A port

J7/CN10: USB Type B 2.0 port (upstream port)

DP1: DP input

CN1: Backlight control connector

CN2: VGA (Analog RGB) Input

CN3: LVDS connector

CN4: OSD connector

CN5: Serial port connector

CN6: Left speaker out connector

CN7: Right speaker out connector

CN8: Internal USB port (for Touch Panel use, with OSD menu power setup) connector

CN9: Internal USB port

CN11: I2C port connector (optional)

CN12: DC12V output connector

5. General Safety Guide

For your own safety and that of your equipment, always take the following precautions.

Disconnect the power plug (by pulling the plug, not the cord), from your computer if any of the following conditions exists:

The power cord or plug becomes frayed or otherwise damaged

You spill something into the case

Your computer has been dropped or the case has been otherwise damaged

You suspect that your computer needs service or repair

You want to clean the computer or screen

You want to remove/install any parts

Thermal

The HID-2100 is a fanless design system, heat is dispatch through rear metal heatsink which is located at VESA mount area. When using your HID-2100 systems, it is normal for the metal heatsink to get warm. The rear metal heatsink of the HID-2100 functions as a cooling surface that transfers heat from inside the computer to the cooler air outside. Do not block this heatsink by any soft material.

Disconnect the power

The only way to disconnect power completely is to unplug the adapter power cord. Make sure at least one end of the power cord is within easy reach so that you can unplug the computer when you need to.

Warning! *Your AC cord came equipped with a three-wire grounding plug (a plug that has a third grounding pin). This plug will fit only a grounded AC outlet. If you are unable to insert the plug into an outlet because the outlet is not grounded, contact a licensed electrician to replace the outlet with a properly grounded outlet. Do not defeat the purpose of the grounding plug.*

Warning! *Never push objects of any kind into this product through the openings in the case. Doing so may be dangerous and result in fire or a dangerous electric shock.*

Never place anything on system case before turn off computer.

Never turn on your computer unless all of its internal and external parts are in place.

Operating the computer when it is open or missing parts can be dangerous and can damage your computer.

Proper Handling

Handle your HID-2100 with care. It is made of metal, glass, and plastic and has sensitive electronic components inside.

Don't use a damaged HID-2100, such as one with a cracked screen, as it may cause injury.

Setup HID-2100 on a stable work surface.

Do not push objects into the ventilation openings.

To lift or move your system, hold its sides.

When you move your system, do not hit the surface of the glass.