

## User Manual High Brightness 24" FHD LED-backlit LCD



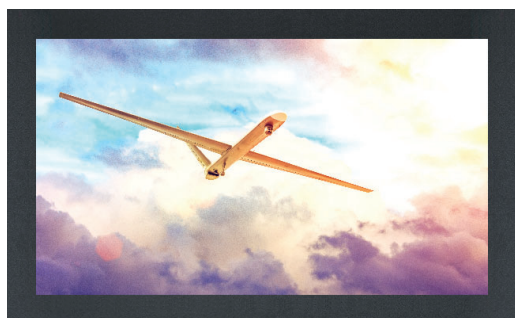
### HAP-F24

Aluminum front bezel



### HNAP-F24

Front NEMA4 / IP65



### HDP-F24

Aluminum Front Panel



### HOP-F24

Universal Open Frame



REACH

Designed and manufactured by Austin Hughes

## Legal Information

First English printing, January 2024

Information in this document has been carefully checked for accuracy; however, no guarantee is given to the correctness of the contents. The information in this document is subject to change without notice. We are not liable for any injury or loss that results from the use of this equipment.

## Safety Instructions

**Please read all of these instructions carefully before you use the device. Save this manual for future reference.**

- Unplug equipment before cleaning. Don't use liquid or spray detergent; use a moist cloth.
- Keep equipment away from excessive humidity and heat. Preferably, keep it in an air-conditioned environment with temperatures not exceeding 40° Celsius (104° Fahrenheit).
- When installing, place the equipment on a sturdy, level surface to prevent it from accidentally falling and causing damage to other equipment or injury to persons nearby.
- When the equipment is in an open position, do not cover, block or in any way obstruct the gap between it and the power supply. Proper air convection is necessary to keep it from overheating.
- Arrange the equipment's power cord in such a way that others won't trip or fall over it.
- If you are using a power cord that didn't ship with the equipment, ensure that it is rated for the voltage and current labelled on the equipment's electrical ratings label. The voltage rating on the cord should be higher than the one listed on the equipment's ratings label.
- Observe all precautions and warnings attached to the equipment.
- If you don't intend on using the equipment for a long time, disconnect it from the power outlet to prevent being damaged by transient over-voltage.
- Keep all liquids away from the equipment to minimize the risk of accidental spillage. Liquid spilled on to the power supply or on other hardware may cause damage, fire or electrical shock.
- Only qualified service personnel should open the chassis. Opening it yourself could damage the equipment and invalidate its warranty.
- If any part of the equipment becomes damaged or stops functioning, have it checked by qualified service personnel.

## What the warranty does not cover

- Any product, on which the serial number has been defaced, modified or removed.
- Damage, deterioration or malfunction resulting from:
  - ☐ Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
  - ☐ Repair or attempted repair by anyone not authorized by us.
  - ☐ Any damage of the product due to shipment.
  - ☐ Removal or installation of the product.
  - ☐ Causes external to the product, such as electric power fluctuation or failure.
  - ☐ Use of supplies or parts not meeting our specifications.
  - ☐ Normal wear and tear.
  - ☐ Any other causes which does not relate to a product defect.
- Removal, installation, and set-up service charges.

## Regulatory Notices Federal Communications Commission (FCC)

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 in business, industrial and commercial environments.

Any changes or modifications made to this equipment may void the user's authority to operate this equipment. 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:

- Re-position 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.

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## Before Installation

- It is very important to mount the equipment in a suitable cabinet or on a stable surface.
- Make sure the place has a good ventilation, is out of direct sunlight, away from sources of excessive dust, dirt, heat, water, moisture and vibration.

## Unpacking

The equipment comes with the standard parts shown in package content. Check and make sure they are included and in good condition. If anything is missing, or damaged, contact the supplier immediately.

## How To Clean Your LCD Monitor



### Caution :

- To avoid the risk of electric shock, make sure your hands are dry before unplugging your monitor from or plugging your monitor into an electrical outlet.
- When you clean your monitor, do not press down on the LCD screen. Pressing down on the screen can scratch or damage your display. Pressure damage is not covered under warranty.
- Use only cleansers made specifically for cleaning monitors and monitor screens. Cleansers not made to clean monitors and monitor screens can scratch the LCD display or strip off the finish.
- Do not spray any kind of liquid directly onto the screen or case of your monitor. Spraying liquids directly onto the screen or case can cause damage which is not covered under warranty.
- Do not use paper towels or abrasive pads to clean your monitor. Using an abrasive pad or any wood based paper product such as paper towels can scratch your LCD screen.

## Cleaning Your Monitor

To clean your LCD safely, please follow these steps :

Disconnect the power cord.

Gently wipe the surface using a clean, dry microfiber cloth. Use as little pressure as possible.

## Cleaning Tough Marks and Smudges

To remove tough marks and smudges, please follow these steps :

Disconnect the power cord.

Spray a small amount of non-abrasive cleanser on a microfiber cloth.



**Caution : Do not spray or apply any liquids directly onto the monitor. Always apply the solution to your microfiber cloth first, not directly on the parts you are cleaning.**

Gently wipe the surface. Use as little pressure as possible.

Wait until your monitor is completely dry before plugging it in and powering it up.

## HAP-F24 / HNAP-F24



**24" FHD LCD display X 1**

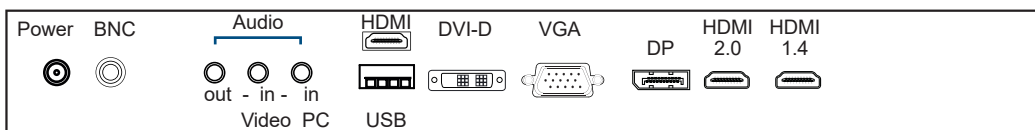
**6ft VGA cable X 1**

**Power adapter X 1**

**Power cord X 1**

**Mounting hardware X 1 pack**

- Mounting bracket x 4 pcs
- M4\* 6mm screw x 8 pcs
- M4\* 50mm screw x 8 pcs



## Options :

**Basic I/O** : HDMI + VGA

**Speaker** : HDMI + VGA + Speaker

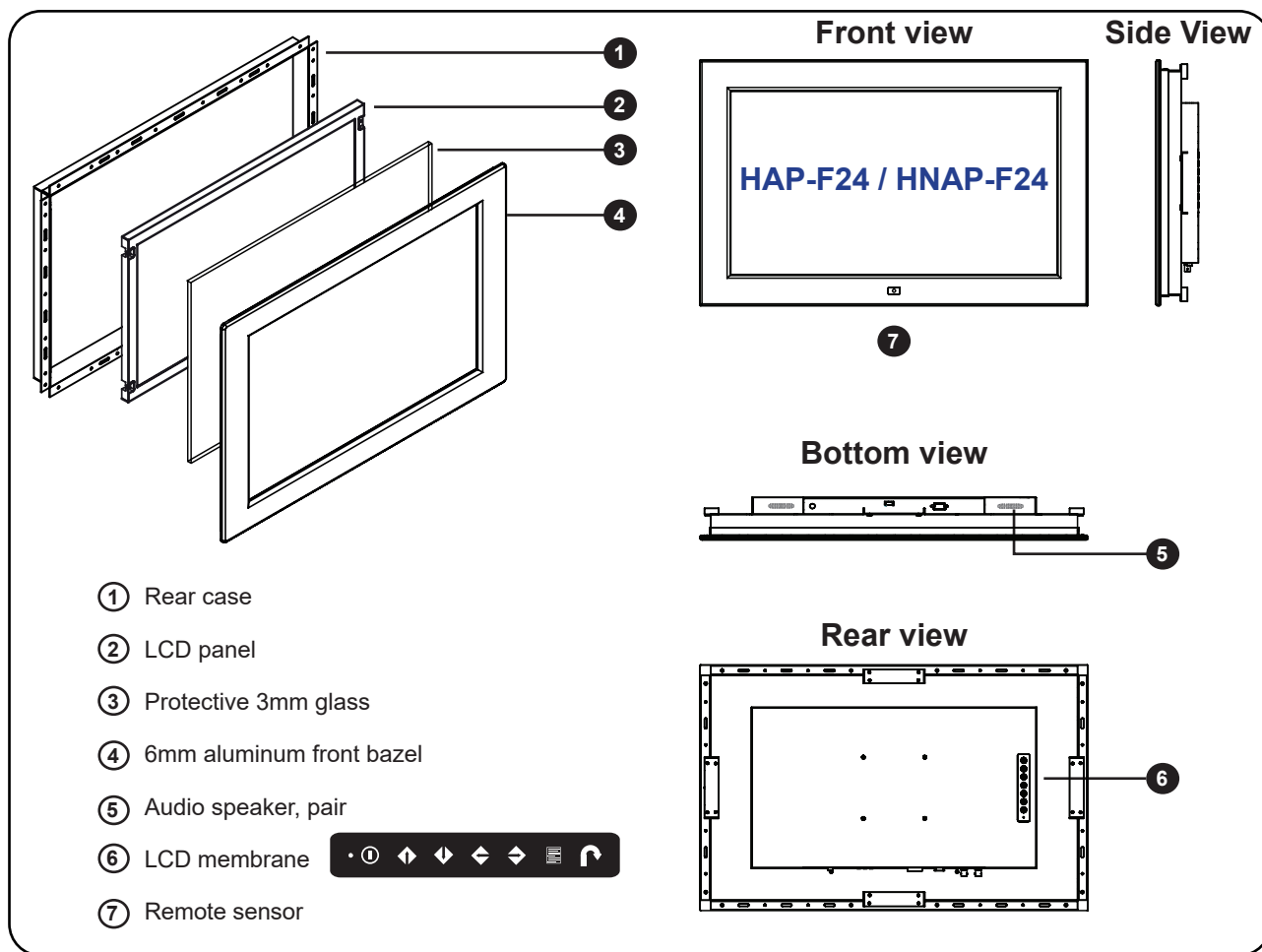
**BNC** : HDMI + VGA + BNC + Audio input + Speaker

**DVI-D** : HDMI + VGA + DVI-D + Audio input & output + Speaker

**DP** : DP-1.0 + HDMI-2.0 + HDMI-1.4 + VGA + Audio input & output + Speaker

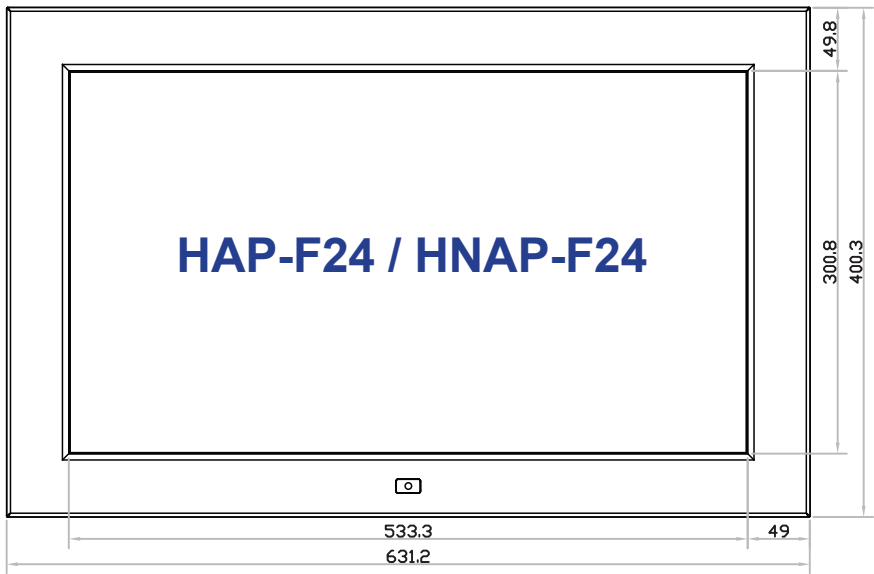
**Options** : SDI, MCS, USB for touchscreen & DC power

## < 1.2 > Structure Diagram

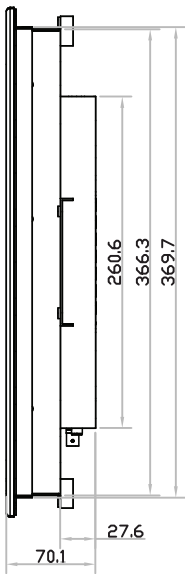


| Model    | Product Dimension<br>(W x D x H)                  | Packing Dimension<br>(W x D x H)           | Net Weight         | Gross Weight       |
|----------|---|--|--------------------|--------------------|
| HAP-F24  | 631.2 x 70.1 x 400.3 mm<br>24.9 x 2.8 x 15.8 inch | 701 x 121 x 685 mm<br>27.6 x 4.8 x 27 inch | 10.9 kg<br>24 lb   | 14.7 kg<br>32.3 lb |
| HNAP-F24 |   |  | 12.4 kg<br>27.3 lb | 16.2 kg<br>35.6 lb |

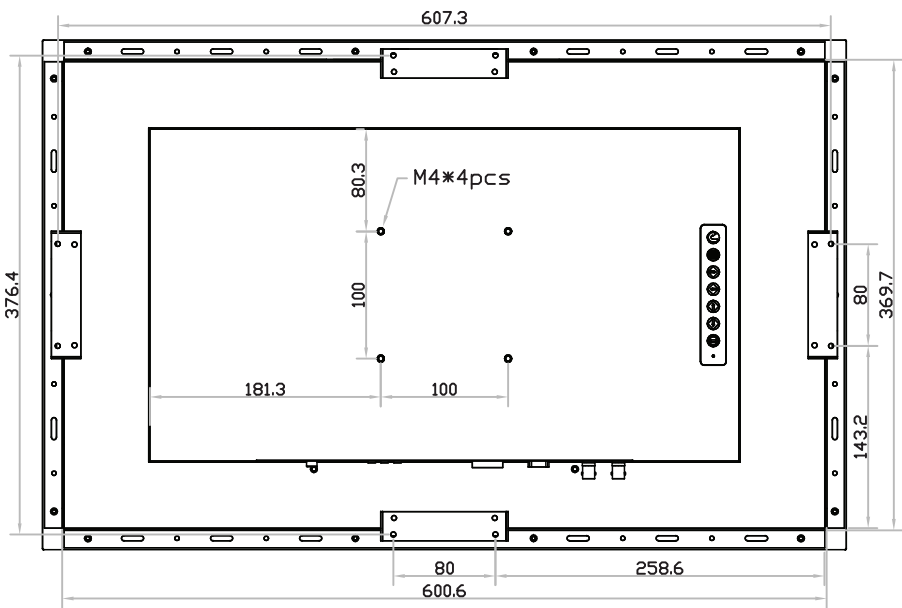
Front View



Side View

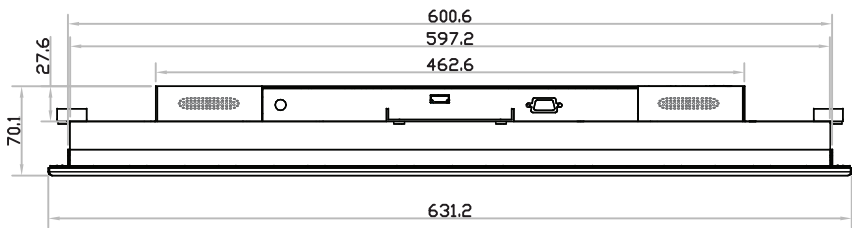


Rear View

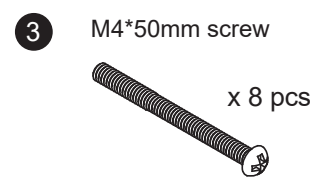
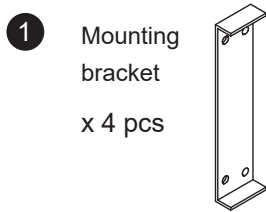


UNIT : mm  
1mm = 0.03937 inch

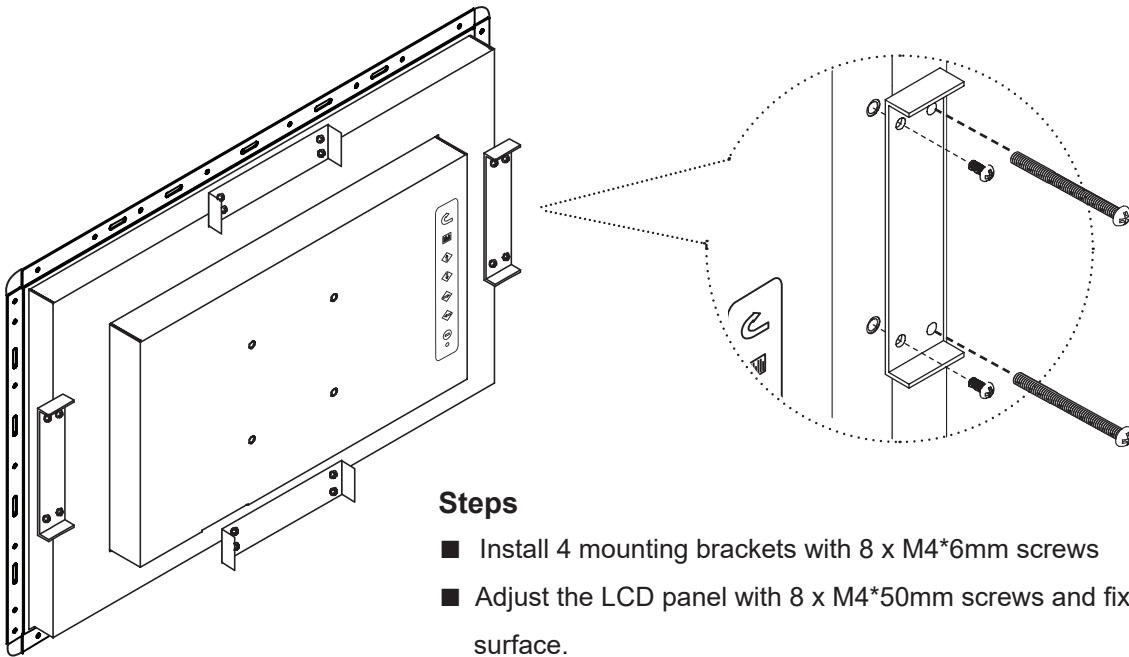
Bottom View



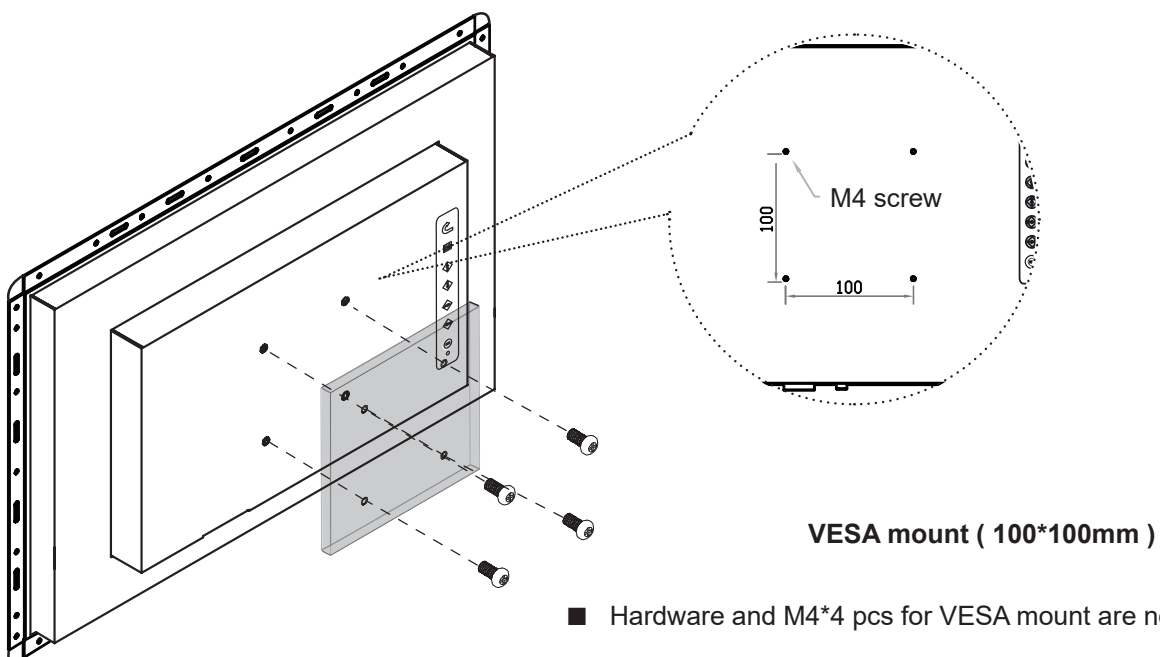
## < 1.3 > Installation ( I ) Panel mount



Hardware set part no. UV-BK#2



## ( II ) VESA mount ( 100\*100mm )



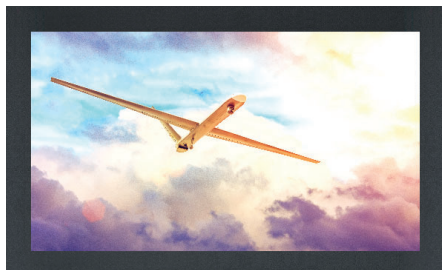


## < Part 2 > HDP-F24

### < 2.1 > Package Content

High Brightness 24" FHD LCD Display

#### HDP-F24

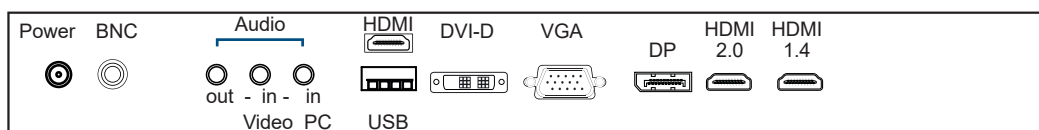


24" FHD LCD display X 1

6ft VGA cable X 1

Power adapter X 1

Power cord X 1



#### Options :

**Basic I/O** : HDMI + VGA

**Speaker** : HDMI + VGA + Speaker

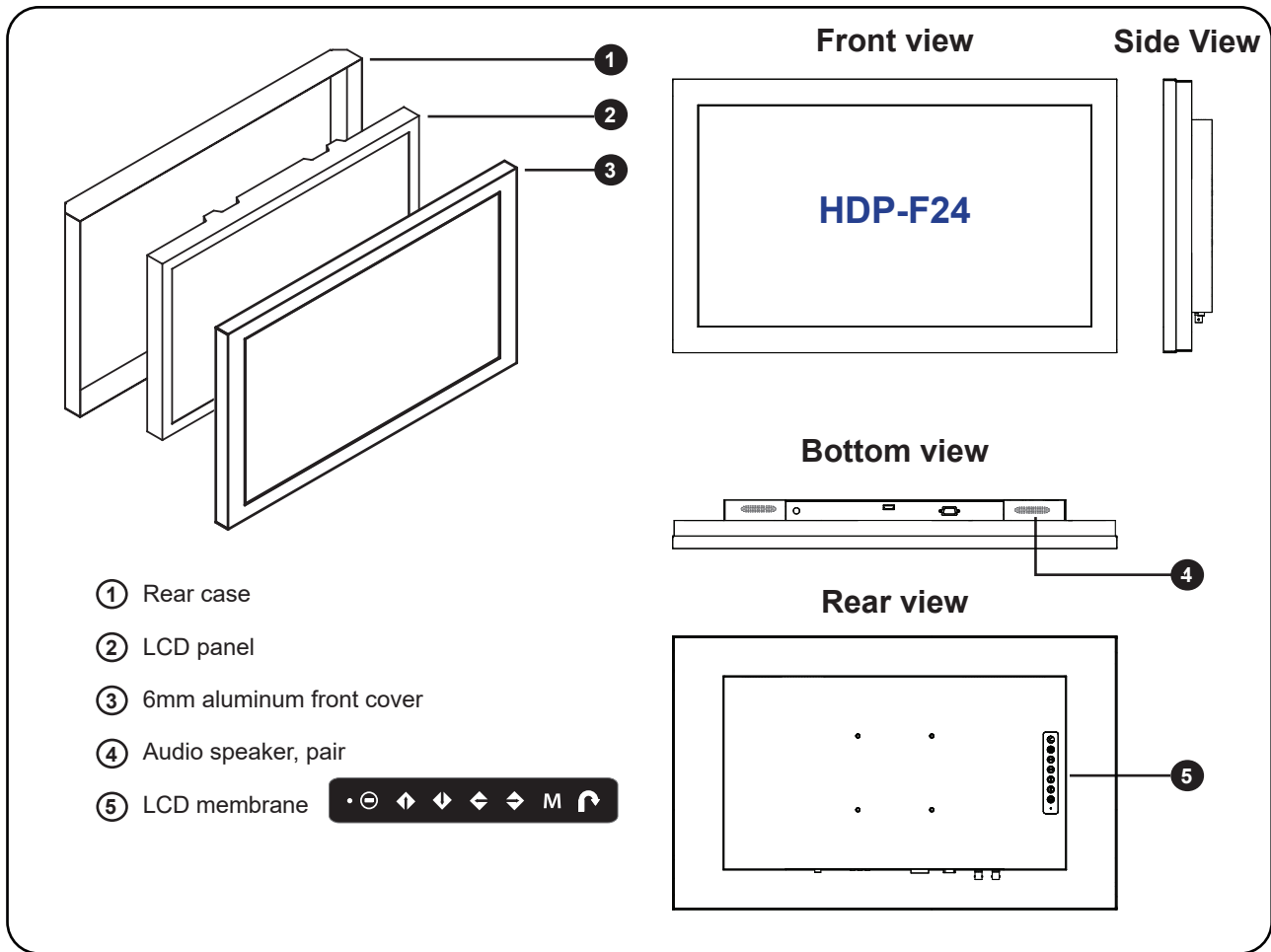
**BNC** : HDMI + VGA + BNC + Audio input + Speaker

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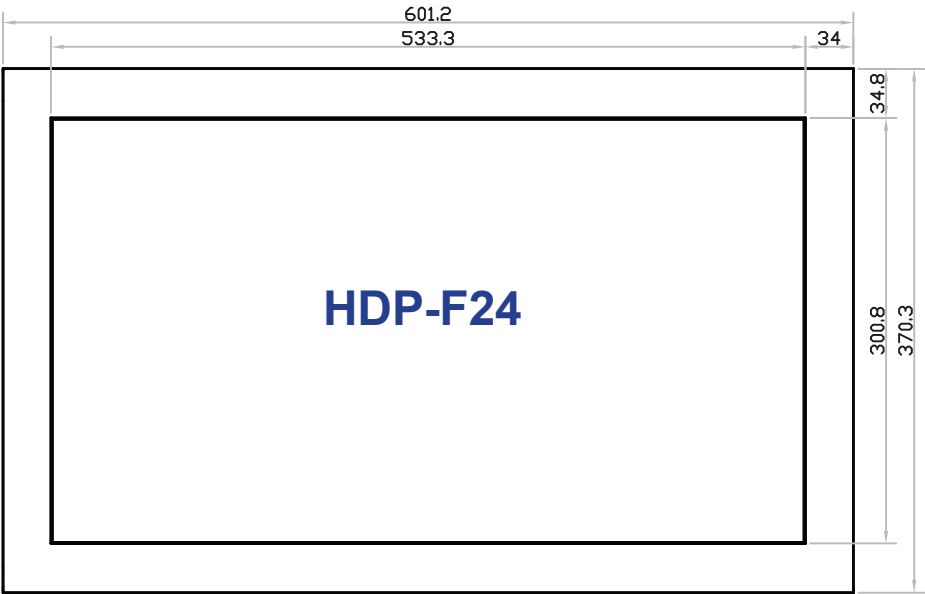
**Options** : SDI, MCS, USB for touchscreen & DC power

## < 2.2 > Structure Diagram

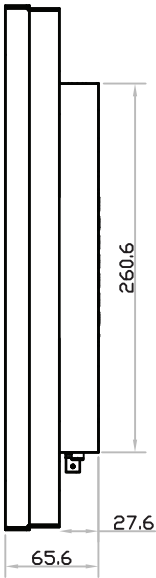


| Model          | Product Dimension<br>(W x D x H)                  | Packing Dimension<br>(W x D x H)           | Net Weight     | Gross Weight       |
|----------------|---|--|----------------|--------------------|
| <b>HDP-F24</b> | 601.2 x 65.6 x 370.3 mm<br>23.7 x 2.6 x 14.6 inch | 701 x 121 x 685 mm<br>27.6 x 4.8 x 27 inch | 10 kg<br>22 lb | 13.7 kg<br>30.1 lb |

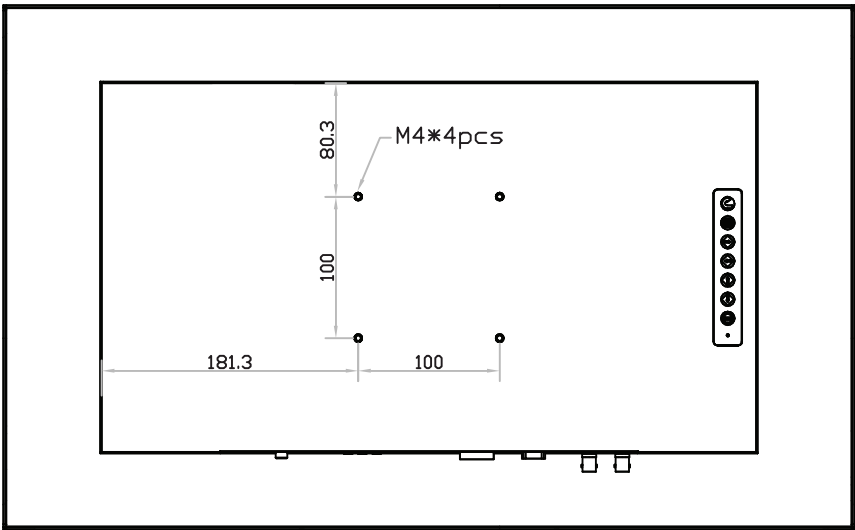
Front View



Side View

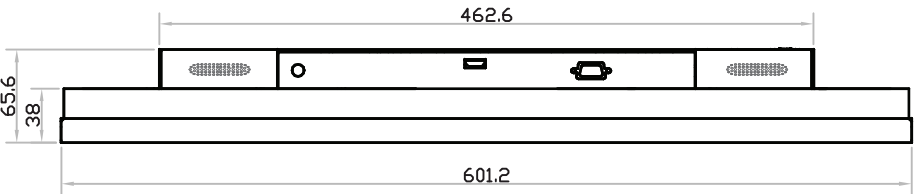


Rear View

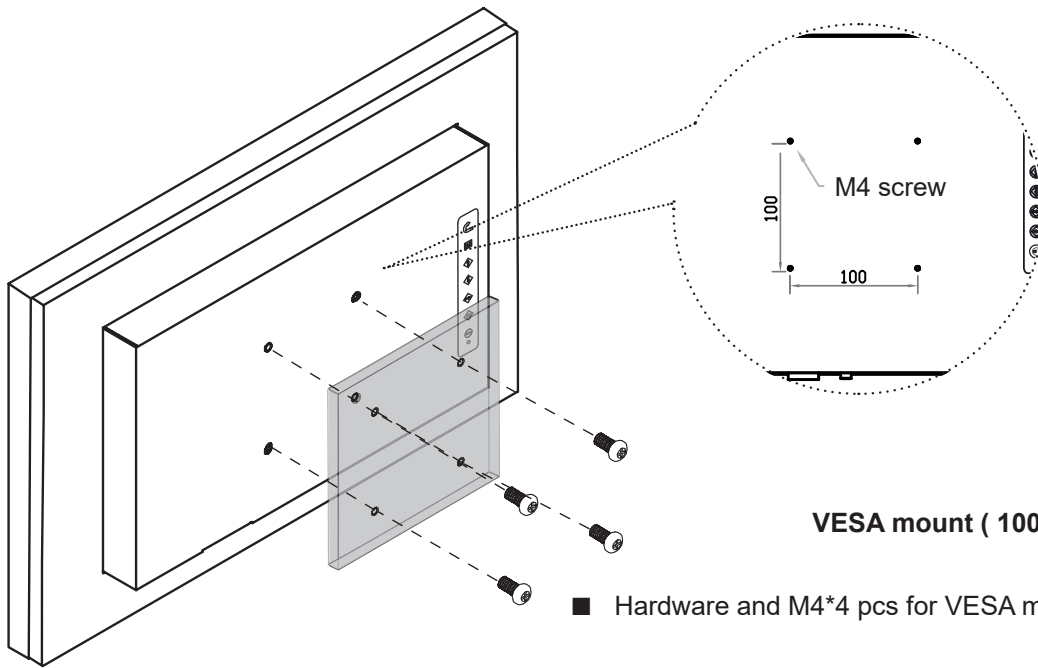


UNIT : mm  
1mm = 0.03937 inch

Bottom View



### < 2.3 > VESA mount Installation



## < Part 3 > HOP-F24

### < 3.1 > Package Content

High Brightness 24" FHD LCD Display

#### HOP-F24

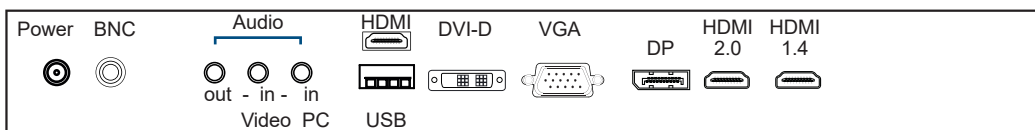


24" FHD LCD display X 1

6ft VGA cable X 1

Power adapter X 1

Power cord X 1



#### Options :

**Basic I/O** : HDMI + VGA

**Speaker** : HDMI + VGA + Speaker

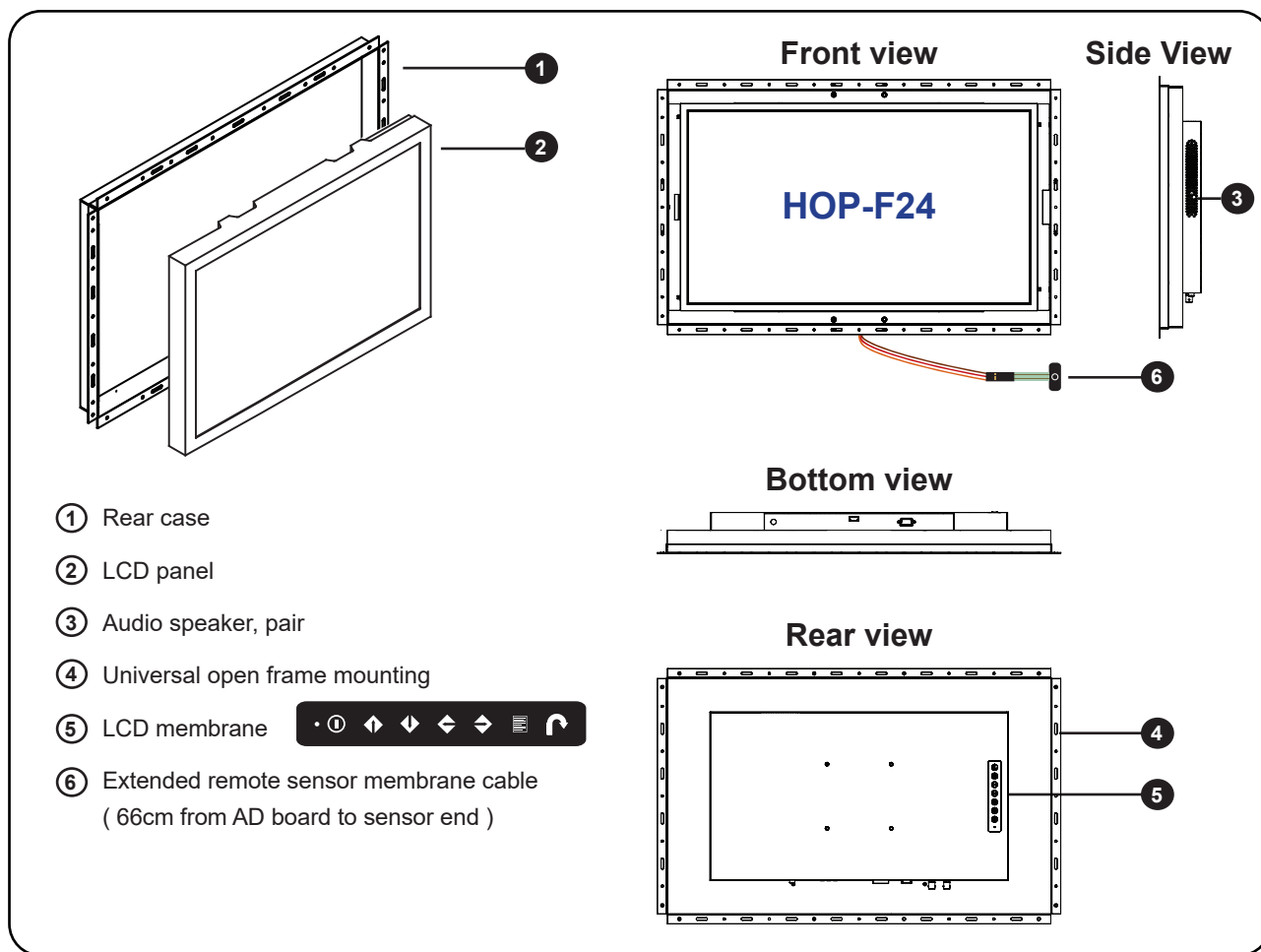
**BNC** : HDMI + VGA + BNC + Audio input + Speaker

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**Options** : SDI, MCS, USB for touchscreen & DC power

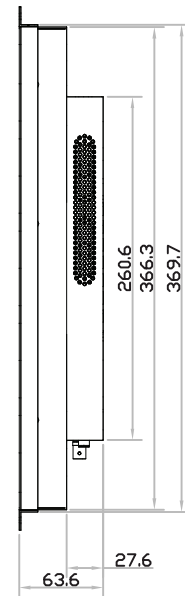
## < 3.2 > Structure Diagram



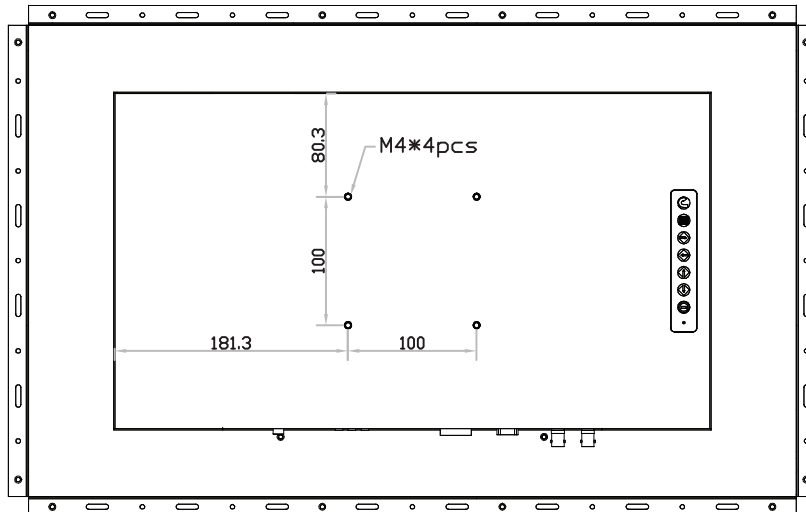
| Model   | Product Dimension<br>(W x D x H)                  | Packing Dimension<br>(W x D x H)           | Net Weight      | Gross Weight       |
|---------|---|--|-----------------|--------------------|
| HOP-F24 | 628.2 x 63.6 x 397.3 mm<br>24.7 x 2.5 x 15.6 inch | 701 x 121 x 685 mm<br>27.6 x 4.8 x 27 inch | 9 kg<br>19.8 lb | 12.7 kg<br>27.9 lb |

### High Brightness 24" FHD LCD Display

### Side View



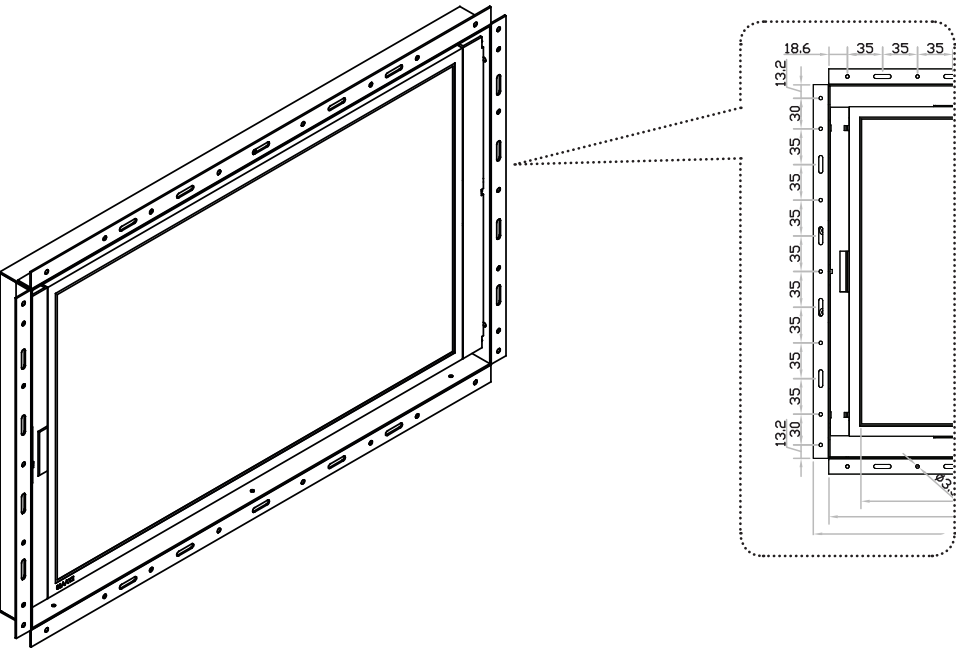
UNIT : mm  
1mm = 0.03937 inch



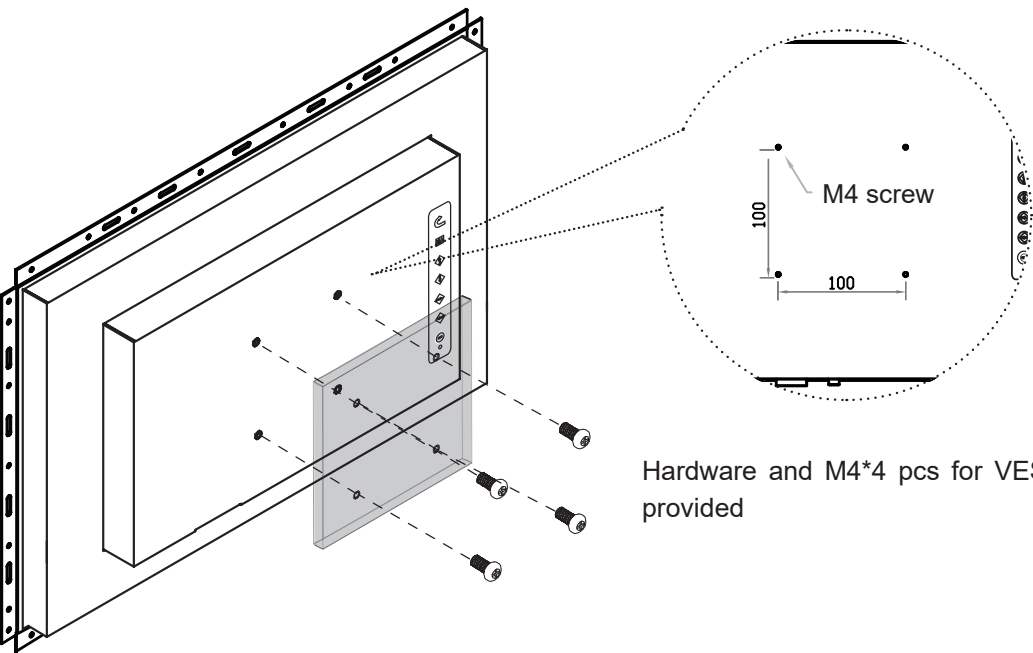
Technical drawing of the front view of the 'L' shaped profile. The drawing shows a cross-section with a total width of 600.6 mm and a total height of 63.6 mm. The top flange has a width of 597.2 mm and a height of 36 mm. The vertical stem has a width of 462.6 mm. The drawing includes a central hole and a small rectangular feature on the top flange.

< 3.3 > Installation

( I ) Universal mount



( II ) VESA mount ( 100\*100mm )



Hardware and M4\*4 pcs for VESA mounting are not provided



Intentionally  
Left  
Blank

## < Part 4 >

### < 4.1 > Product Specifications

| Mechanical Design | HAP-F24         | HNAP-F24      | HDP-F24     | HOP-F24    |
|-------------------|-----------------|---------------|-------------|------------|
| Protection        | 6mm front bezel | NEMA 4 / IP65 | front cover | open frame |
| Front Panel       | Black, RAL 9005 |               |             | -          |
| Rear Casing       | Black, RAL 9005 |               |             |            |
| VESA mount        | 100 x 100 mm    |               |             |            |
| Universal mount   | -               | -             | -           | ready      |
| Desktop stand     | option          | option        | option      | -          |
| Panel mount       | bundled         | -             | -           | -          |

| LED-backlit LCD Panel            |                                  |
|----------------------------------|----------------------------------|
| Panel Size ( diagonal )          | 23-inch Widescreen TFT color LCD |
| Native resolution                | 1920 x 1080                      |
| Brightness ( cd/m <sup>2</sup> ) | 1000                             |
| Contrast Ratio ( typ. )          | 5000 : 1                         |
| Colors                           | 16.7 colors (8-bits)             |
| Viewing Angle ( L/R/U/D )        | 89/89/89/89                      |
| Response Time ( ms )             | 25                               |
| Dot pitch ( mm )                 | 0.28                             |
| Display Area ( mm )              | 531.36H x 298.89V                |
| Surface treatment                | Anti-glare                       |
| Surface hardness                 | 3H                               |
| Backlight Type                   | LED                              |
| MTBF ( hrs )                     | 50,000                           |

| Video             |                     |
|-------------------|---------------------|
| VGA               | Analog 0.7Vp-p      |
| DVI               | DVI-D single link   |
| HDMI              | HDMI 2.0 / HDCP 2.2 |
|                   | HDMI 1.4 / HDCP 1.4 |
| Display port      | DP 1.0 / HDCP 1.3   |
| Composite ( BNC ) | NTSC & PAL          |

| Audio Option             |                   |
|--------------------------|-------------------|
| Input                    |                   |
| Connector                | 3.5mm stereo jack |
| Impedance / Power level  | 30kΩ / 750mV      |
| Output                   |                   |
| Connector                | 3.5mm stereo jack |
| Resistance / Power level | 30kΩ / 2.8V       |
| Speaker:                 |                   |
| Dual Stereo              | 2W x 2            |

\*When the audio output is connected, speaker output is OFF

| Power             |                                       |
|-------------------|---------------------------------------|
| Input             | Auto-sensing 100 to 240VAC, 50 / 60Hz |
| Consumption:      |                                       |
| Screen ON         | Max. 54W                              |
| Power saving mode | Max. 2W                               |
| Power button OFF  | Max. 1W                               |

| Compliance  |                      |
|-------------|----------------------|
| EMC         | FCC & CE             |
| Safety      | CE / LVD & UKCA      |
| Environment | RoHS3 & REACH / WEEE |

| Environmental Conditions |             |                                    |
|--------------------------|-------------|------------------------------------|
| Operating                | Temperature | 0 to 55°C degree                   |
|                          | Humidity    | 10~90%, non-condensing             |
|                          | Altitude    | 16,000 ft                          |
| Storage / Non-operating  | Temperature | -20 to 60°C degree                 |
|                          | Humidity    | 5~90%, non-condensing              |
|                          | Altitude    | 40,000 ft                          |
|                          | Shock       | 10G acceleration ( 11ms duration ) |
|                          | Vibration   | 10~300Hz 0.5G RMS random vibration |

| Physical Specification | HAP-F24              | HNAP-F24          | HDP-F24              | HOP-F24              |
|------------------------|----------------------|-------------------|----------------------|----------------------|
| Product ( W x D x H )  |                      |                   |                      |                      |
| mm                     | 631.2 x 70.1 x 400.3 |                   | 601.2 x 65.6 x 370.3 | 628.2 x 63.6 x 397.3 |
| inch                   | 24.9 x 2.8 x 15.8    |                   | 23.7 x 2.6 x 14.6    | 24.7 x 2.5 x 15.6    |
| Packing ( W x D x H )  |                      |                   |                      |                      |
| mm                     | 701 x 121 x 685      |                   |                      |                      |
| inch                   | 27.6 x 4.8 x 27      |                   |                      |                      |
| Net Weight             | 10.9 kg / 24 lb      | 12.4 kg / 27.3 lb | 10 kg / 22 lb        | 9 kg / 19.8 lb       |
| Gross Weight           | 14.7 kg / 32.3 lb    | 16.2 kg / 35.6 lb | 13.7 kg / 30.1 lb    | 12.7 kg / 27.9 lb    |
| Chassis color          | Dark                 |                   |                      |                      |
| Chassis materials      | Aluminum             |                   |                      |                      |






\* All dimensions stated are subject to change if options are selected / integrated to base model part codes

| Applicable Format  |              |                                       |
|--------------------|--------------|---------------------------------------|
| DVI-D / VGA Input  | PC Signal    | 1920 x 1080 x 60Hz                    |
|                    |              | 1400 x 1050 x 60Hz                    |
|                    |              | 1440 x 900 x 60Hz                     |
|                    |              | 1360 x 768 x 60Hz                     |
|                    |              | 1280 x 1024 x 60 / 75Hz               |
|                    |              | 1280 x 960 x 60Hz                     |
|                    |              | 1280 x 768 x 60 / 75Hz                |
|                    |              | 1152 x 864 x 75Hz                     |
|                    |              | 1024 x 768 x 60 / 70 / 75Hz           |
|                    |              | 848 x 480 x 60Hz                      |
|                    |              | 800 x 600 x 60 / 72 / 75Hz            |
|                    |              | 720 x 400 x 70Hz                      |
|                    |              | 640 x 480 x 60 / 72 / 75Hz            |
|                    | Audio Signal | 2ch Linear PCM                        |
| HDMI Input         | PC Signal    | Same as VGA                           |
|                    | HDMI 1.4     | 1920 x 1080 x 50 / 60Hz ( 1080p )     |
|                    |              | 1920 x 1080 x 25 / 30Hz ( 1080i )     |
|                    |              | 1280 x 720 x 50 / 60Hz ( 720p )       |
|                    |              | 720 x 480 x 50 / 60Hz ( 576p / 480p ) |
| Display port Input | PC Signal    | 2ch Linear PCM                        |
|                    |              | 1920 x 1080 x 60Hz                    |
|                    |              | 1600 x 1200 x 60Hz                    |
|                    |              | 1360 x 768 x 60Hz                     |
|                    |              | 1280 x 768 x 60 / 75Hz                |
|                    |              | 1280 x 768 x 60Hz                     |
|                    |              | 1024 x 768 x 60 / 70 / 75Hz           |
|                    |              | 800 x 600 x 60 / 72 / 75Hz            |
|                    |              | 720 x 400 x 70Hz                      |
|                    |              | 640 x 480 x 60 / 72 / 75Hz            |
|                    | Audio Signal | 2ch Linear PCM                        |

## < 4.2 > On-screen Display Operation ( OSD )

- Power light
- Green = On
- Orange = Power saving



| Membrane Switch   | Function  |
|---|---|
|  | Power on / off LCD  |
|  | Display the OSD menu  |
|  | Scrolls through menu options and adjusts the displayed control<br>(To auto adjustment by pressing the button  for 5 seconds) |
|  | Exit the OSD screen<br>Toggle analog, digital & video connection (DVI-D and video options only)   |

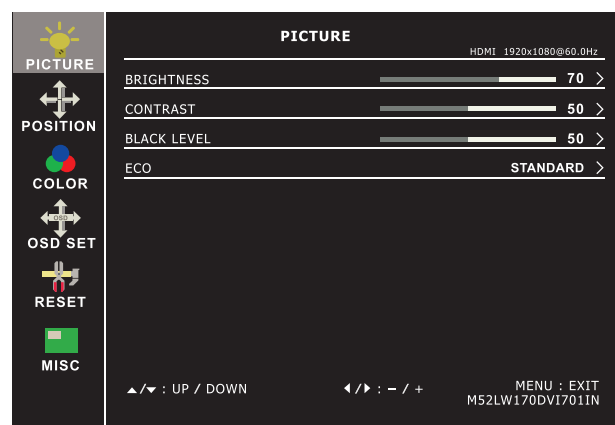
### ① Picture

Brightness : Adjust the screen brightness

Contrast : Adjust the difference between the image background ( black level ) and the foreground ( white level )

Black level : Adjust background black level of the screen

Eco : Screen in power saving mode



### ② Position

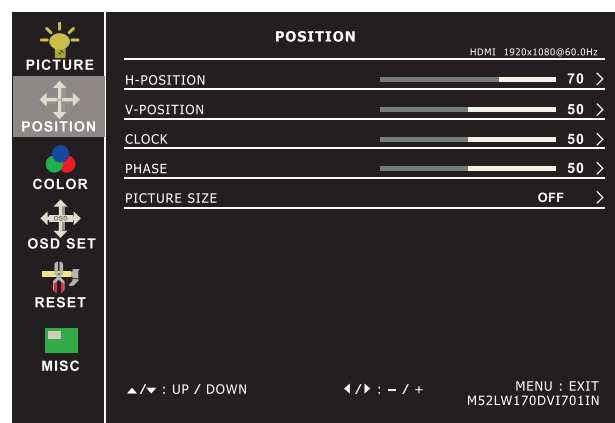
H-Position : To adjust the horizontal position of the video

V-Position : To adjust the vertical position of the video

Clock : To auto adjust H. Size of the screen

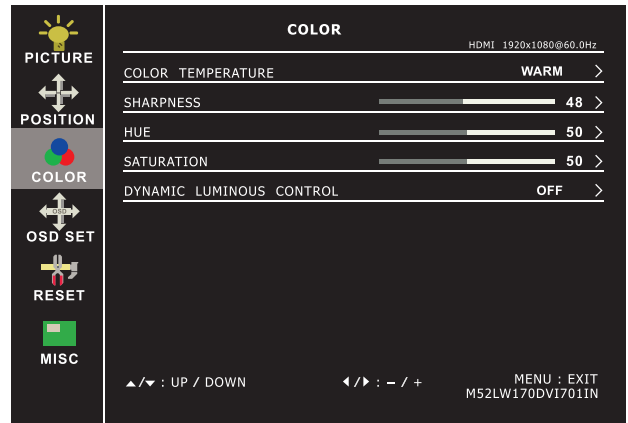
Phase : To fine tune the screen.

Picture size : FULL SCREEN / 4:3 / 5:4 / 16:10



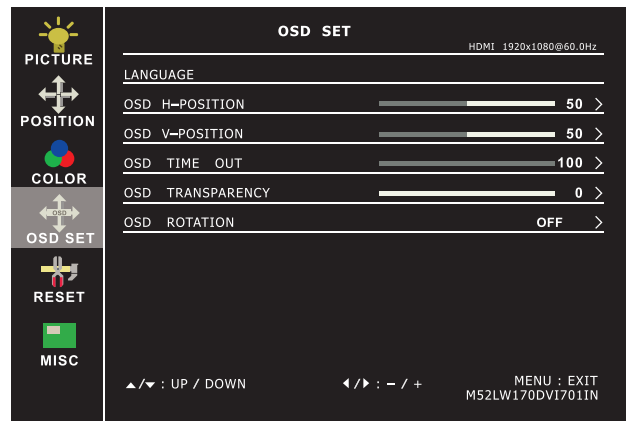
### ③ Color

- Color temperature : User / Warm / Cool / 5400k mode and Red / Green / Blue color balance
- Sharpness : Adjust the image from weak to sharp
- Hue : Adjust the screen hue value
- Saturation : Adjust the saturation of the image color
- Dynamic luminous control : Control the dynamic brightness



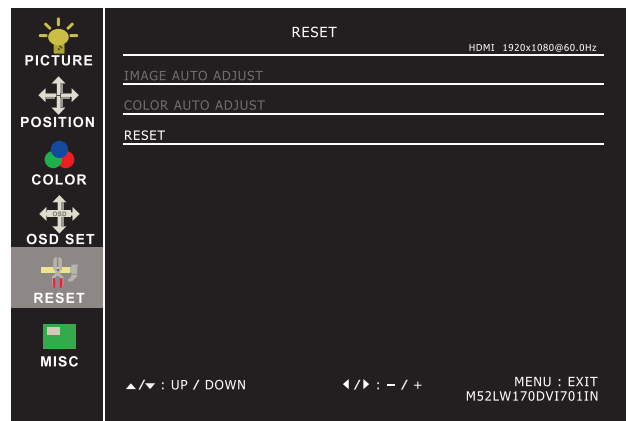
### ④ OSD Set

- Language : Select the language in which the OSD menu is displayed - English
- OSD H-Position : Align the screen image left or right
- OSD V-Position : Align the screen image up or down
- OSD time out : Adjust the screen timeout
- OSD transparency : Adjust the screen transparency
- OSD rotation : Rotate the screen - 90° / 180° / 270°



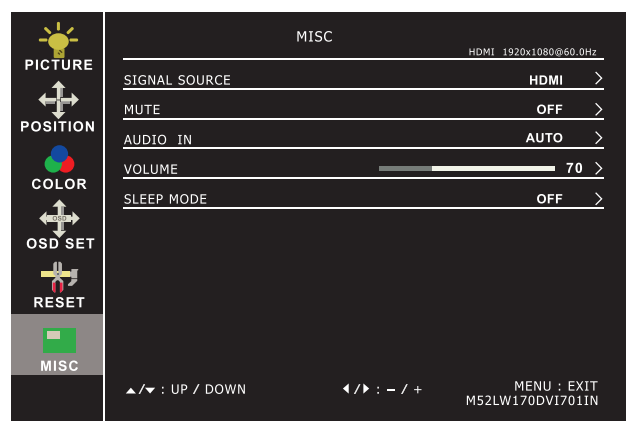
### ⑤ Reset

- Reset : Return the adjustment back to factory setting



### ⑥ MISC

- Signal source : Select the signal source - DP / HDMI1 / HDMI2
- Mute : Turn off the surrounding sound
- Audio in : Auto / Line in / DP
- Volume : Adjust the volume of sound
- Sleep mode : Set the off time - 10 min / 20 min / 30 min / 50 min / 60 min / 120 min / 240 min



## < Part 5 > Options

### < 5.1 > Option Table

| Options                       | HAP / HNAP | HDP | HOP |
|-------------------------------|------------|-----|-----|
| SDI *                         | ✓          | ✓   | ✓   |
| DVI-D **                      | ✓          | ✓   | ✓   |
| Composite ( BNC ) ***         | ✓          | ✓   | ✓   |
| Audio                         | ✓          | ✓   | ✓   |
| Touchscreen                   | ✓          | ✓   | ✓   |
| MCS multi-display control     | ✓          | ✓   | ✓   |
| DC Power                      | ✓          | ✓   | ✓   |
| MIL-type / lockable connector | ✓          | ✓   | ✓   |



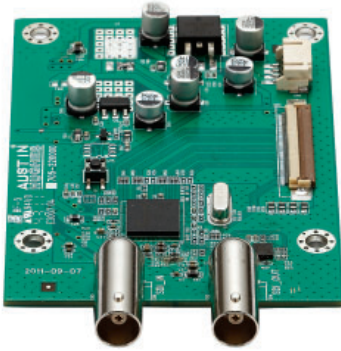
\* SDI option comes speakers.

\*\* For DVI-D option, in some circumstances, if the user connects the LCD to PC via HDMI port for video and audio signals, the LCD may display incorrectly on a full screen. If so, please adjust the display card setting on display size to fix the issue.

\*\*\* SDI, DVI-D & BNC options come with RC-2 remote controller.

## < 5.2 > Options : 3G / HD / SD-SDI input

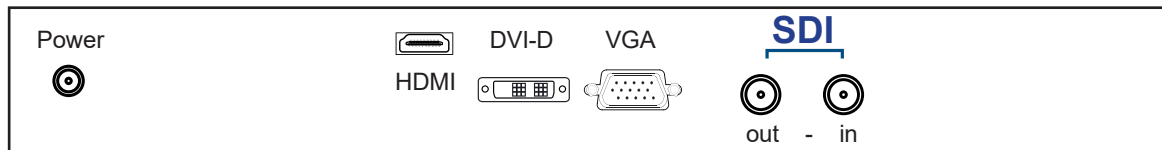
## High Brightness 24" FHD LCD Display



Austin Hughes' SDI input is an ideal solution for the broadcast-grade video and high resolution CCTV market.

Designed for use with UltraView displays, a SDI input module can support up to 1080p @60Hz resolution without using additional space or power and it comes standard with a 2-year warranty.

\* SDI option comes with speakers & RC-2 remote controller.



|              |            |  |
|--------------|------------|--|
| <b>INPUT</b> | 3G-SDI IN  | BNC x 1 / 0.8Vp-p ( 75 ohm )                   |
|              | 3G-SDI OUT | BNC x 1 / Active through, equalized & relocked |

|                            |       |   |
|----------------------------|-------|---|
| <b>Standard Compliance</b> | Video | SMPTE 425M / 274M / 296M / 125M<br>ITU-R BT.656 |
|                            | Audio | SMPTE 299M / 272M-C                             |

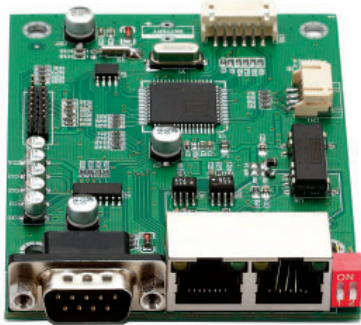
|                                |              |       |                        |
|--------------------------------|--------------|-------|------------------------|
| <b>Compatible Video Format</b> | 3G-SDI       | 1080p | @60 / 50Hz, 4:2:2      |
|                                |              | 1080p | @30 / 25 / 24Hz, 4:4:4 |
|                                |              | 1080i | @60 / 50Hz, 4:4:4      |
|                                |              | 720p  | @60 / 50Hz, 4:4:4      |
|                                | HD-SDI       | 1080p | @30 / 25 / 24Hz, 4:2:2 |
|                                |              | 1080i | @60 / 50Hz, 4:2:2      |
|                                |              | 720p  | @60 / 50Hz, 4:2:2      |
|                                | SD-SDI       | 480i  | @60Hz, 4:2:2           |
|                                | ITU-R BT.656 | 576i  | @50Hz, 4:2:2           |

|                                |        |  |
|--------------------------------|--------|--|
| <b>Compatible Audio Format</b> | 3G-SDI | 48kHz, 16 / 20 / 24 bit, 2 CH, Synchronized Video                |
|                                | HD-SDI | 48kHz, 16 / 20 / 24 bit, 2 CH, Synchronized Video                |
|                                | SD-SDI | 48kHz, 16 / 20 / 24 bit, 2 CH, Synchronized / Asynchronous Video |

|  |        |                   |
|--|--------|-------------------|
| <b>Max. Transmission Distance<br/>75 ohm coaxial cable</b> | 3G-SDI | 150m at 2.97Gb/s  |
|  | HD-SDI | 250m at 1.485Gb/s |
|  | SD-SDI | 480m at 270Mb/s   |

## < 5.3 > Options : MCS

### MCS ( Multi-display Control )



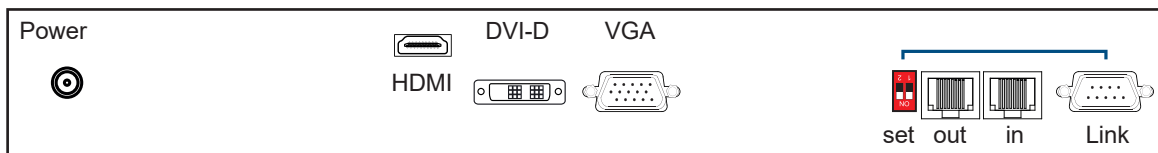
More control is always good. Especially when it is necessary and easy. Austin Hughes provides MCS solution to control the **OSD** of various UltraView LCD display up to 64 units.

The RS-232C is used for the communication between the PC and the first display via a 15 feet serial cable while the CAN bus is used for the various LCD displays cascade together via CAT 5/6 cable, and daisy chain up to 1,000 meters.

Designed for use with UltraView LCD displays, Austin Hughes provides a MCS input module without using additional space or power and it comes standard with a 2-year warranty.

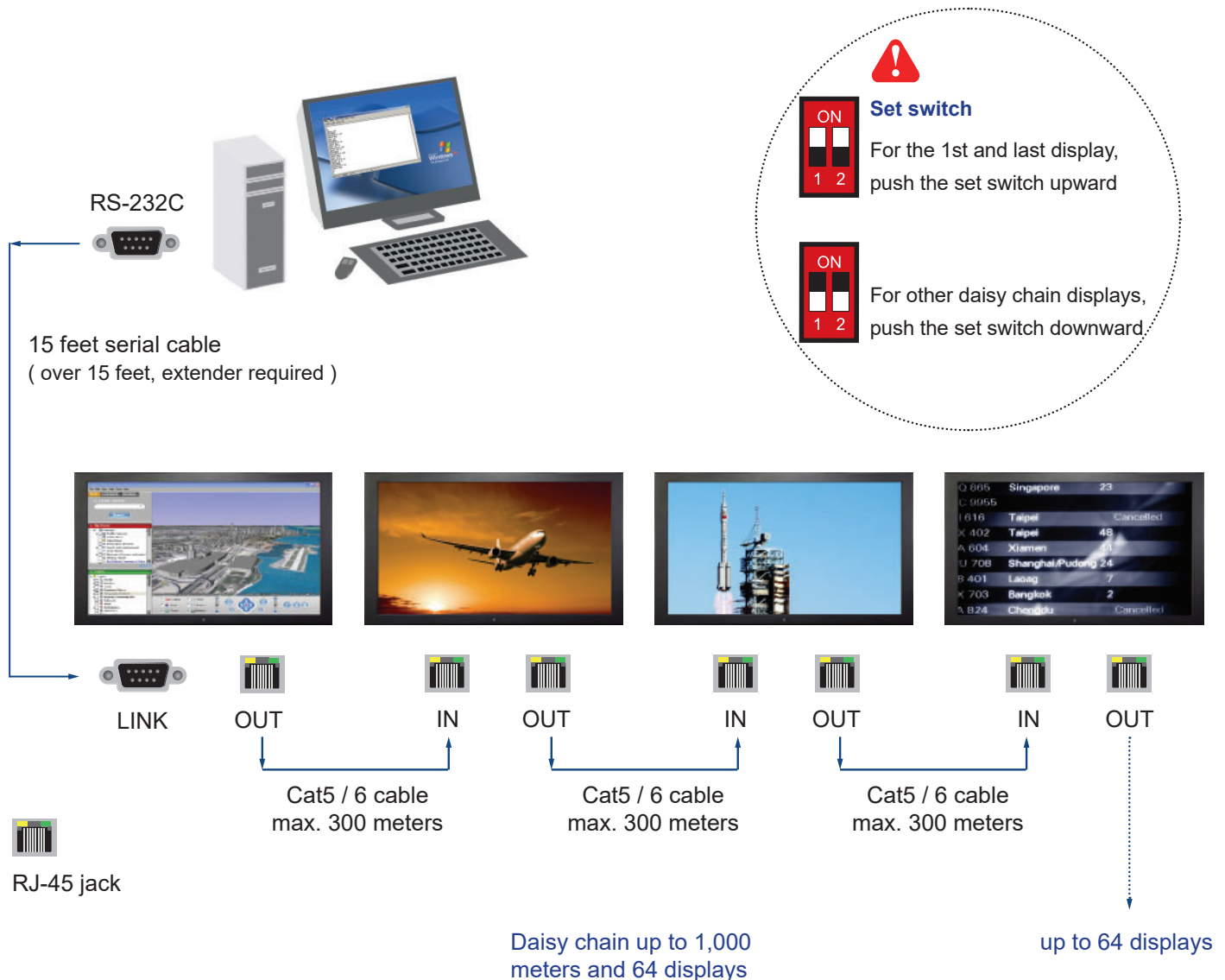
\* MCS option comes with speakers.

### MCS



\*\*\* Please download the protocol of MCS control at :

<http://www.austin-hughes.com/support/usermanual/ultraview/UM-UV-MCS.pdf>



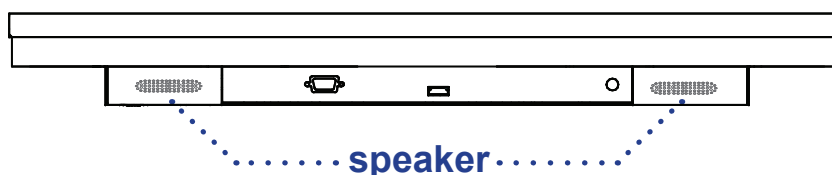


## < 5.4 > Options :

High Brightness 24" FHD LCD Display

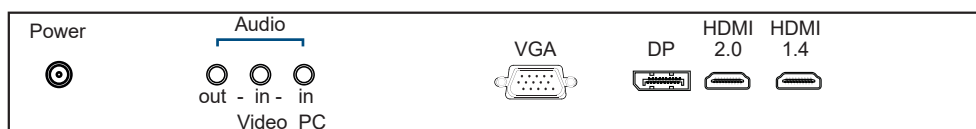
### Speaker Option

Bottom view



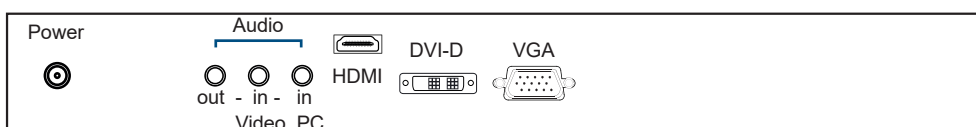
### DP Option

- Display Port ( DP 1.0, HDCP 1.3 )
- HDMI 2.0 ( HDMI 2.0, HDCP 2.2 )
- HDMI 1.4 ( HDMI 1.4, HDCP 1.4 )
- Audio ( Audio input & output )
- Speaker



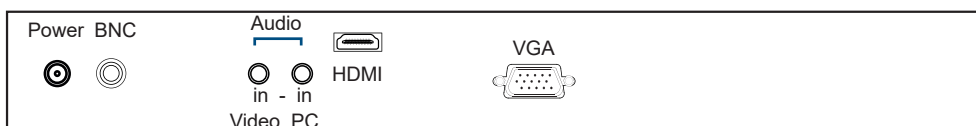
### DVI-D Option

- DVI-D ( DVI-D, TMDS single link )
- Audio ( Audio input & output )
- Speaker



### BNC Option

- BNC ( Composite, BNC )
- Audio IN
- Speaker

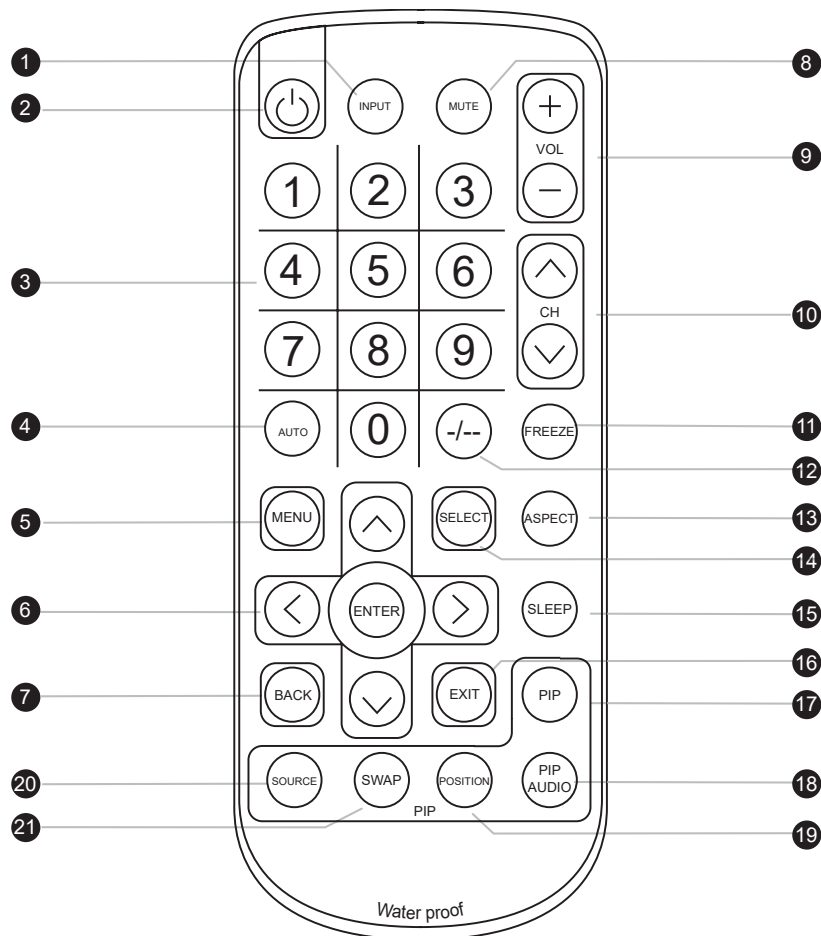


\*\*\*

( 1 ) In some circumstances, if the user connects the LCD to PC via HDMI port for video and audio signals, the LCD may display incorrectly on a full screen. If so, please adjust the display card setting on display size to fix the issue.

( 2 ) DP, DVI-D & BNC options come with RC-2 remote controller x 1  
( please refer to P.22 Remote Controller (RC-2) )

## < 5.5 > How to Use RC-2 Remote Controller



|                      |                              |  |
|----------------------|------------------------------|--|
| ①                    | <b>INPUT</b>                 | Select the source  |
| ②                    |                              | Switches on or off the TV  |
| ③                    | <b>0 - 9</b>                 | Only use in TV mode. Select channels. For channel numbers 10 and above, enter the second digit within two seconds.   |
| ④                    | <b>AUTO</b>                  | Auto adjust  |
| ⑤                    | <b>MENU</b>                  | Display the menu on the screen or go to the previous menu  |
| ⑥                    | <b>▲ / ▼ / ◀ / ▶ / ENTER</b> | Go to the upper menu or select the previous value /<br>Go to the next menu or select the next value /<br>Decrease the setting value /<br>Increase the setting value or enter to the select item setting<br>Enter to the select item settings or excude the setting |
| ⑦                    | <b>BACK</b>                  | Back to previous value   |
| ⑧                    | <b>MUTE</b>                  | Turn on or off the speaker   |
| ⑨                    | <b>Vol + / -</b>             | Increase or decrease the speaker volume  |
| ⑩                    | <b>CH + / -</b>              | For TV model only, increase or decrease the channel number   |
| ⑪                    | <b>FREEZE</b>                | Reserve for OEM model  |
| ⑫                    | <b>- / --</b>                | For setting input single or double digits  |
| ⑬                    | <b>ASPECT</b>                | Adjust the screen size   |
| ⑭                    | <b>SELECT</b>                | To select the existing item  |
| ⑮                    | <b>SLEEP</b>                 | Select the sleeping time   |
| ⑯                    | <b>EXIT</b>                  | Exit the menu or cancel  |
| <b>PIP functions</b> |                              |  |
| ⑰                    | <b>PIP</b>                   | Picture in picture   |
| ⑱                    | <b>PIP AUDIO</b>             | To set the audio of in PIP mode  |
| ⑲                    | <b>POSITION</b>              | To set the screen position in PIP mode   |
| ⑳                    | <b>SOURCE</b>                | PIP Source   |
| ㉑                    | <b>SWAP</b>                  | Swap screen in PIP mode  |

Intentionally  
Left  
Blank

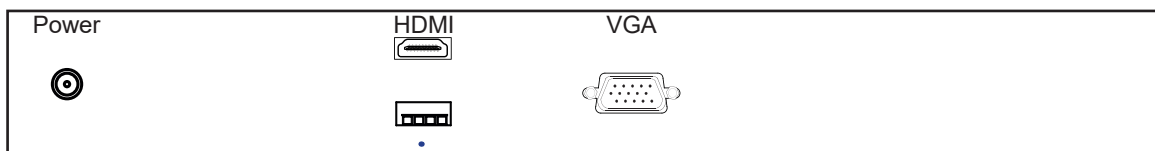
## < 5.6 > Options : Touchscreen & driver



### HF24" USB Touchscreen Specification

|                      |                               |
|----------------------|-------------------------------|
| Model                | TRB e-Resistive               |
| Technology           | 5-Wire Resistive              |
| Touch Point          | Single                        |
| Input Type           | Finger or Stylus              |
| Resolution           | 2048 x 2048                   |
| Touch Point Accuracy | -                             |
| Response Speed       | 15 ms                         |
| Activation Force     | ≤ 50 g                        |
| Surface Hardness     | 3H                            |
| Light Transmission   | 80% ± 3%                      |
| Haze                 | 8% ± 3%                       |
| Durability           | 10 million touches            |
| Top Layer            | ITO Film                      |
| Bottom Layer         | ITO Glass                     |
| Thickness            | 3.2 ± 0.2 mm                  |
| Connector            | USB Type A                    |
| Compatibility        | Windows 7 / XP / Vista, Linux |

- Dimension will be changed if touchscreen required
- USB touchscreen package includes 1 x 6ft USB cable, quick reference guideline and CD disc
- For detailed information, please refer to the attached CD disc
- As the touchscreen unit is not made of toughened glass, please handle it carefully



**USB Touchscreen**

## TRB Driver

**Please follow the below steps to setup the touch screen:-**

**Step 1.** Run the bundled CD disc or download the driver from the link below :

<http://www.austin-hughes.com/resources/driver/ultraview>

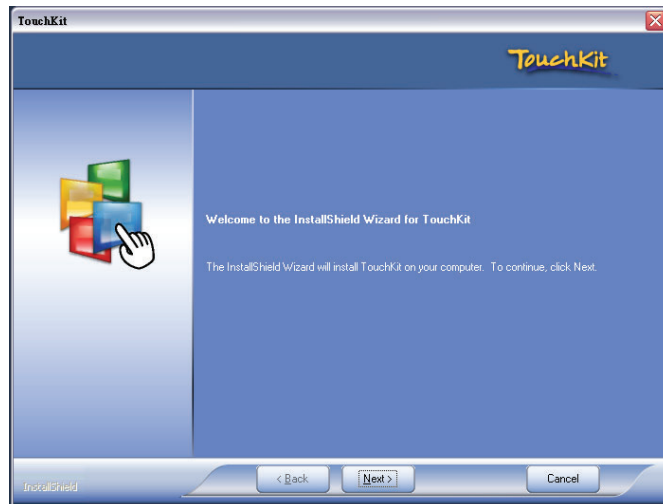
**Step 2.** Double click the Setup.exe

**Step 3.** Follow the installation instruction to finish the setup

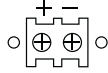
**Step 4.** After installation, run the TouchKit program & the "4 point calibration"



Please do the initial calibration  
after the first setup



## < 5.7 > Options : DC Power





| Model                | 12V     | 24V      | 48V      | 125V      |
|----------------------|---------|----------|----------|-----------|
| <b>Input rating</b>  |         |          |          |           |
| Input voltage:       | 12-Volt | 24-Volt  | 48-Volt  | 110-Volt  |
| Input range:         | 9 ~ 18V | 18 ~ 36V | 36 ~ 75V | 66 ~ 160V |
| Input current        |         |          |          |           |
| - No load            | 50 mA   | 50 mA    | 50 mA    | 35 mA     |
| - Full load          | 4950 mA | 2450 mA  | 1220 mA  | 749 mA    |
| <b>Output rating</b> |         |          |          |           |
| Output voltage:      | 12-Volt | 12-Volt  | 12-Volt  | 12-Volt   |
| Output current:      | 4.16A   | 4.16A    | 4.16A    | 6.25A     |
| <b>Efficiency</b>    | 84%     | 85%      | 85%      | 91%       |

\*\*\* For DC power option :

( 1 ) If the unit with LCD, **earthing** may be required 

|                      | Input                    | Part no.  | MIL Standard      |
|----------------------|--------------------------|---|-------------------|
| MIL - type Connector | DC Power ***<br>( Male ) | MS3470W8-33P<br>  | MIL - DTL - 26482 |
|                      | VGA ***<br>( Male )      | MS3470W14-15P<br> | MIL - DTL - 26482 |

\*\*\* There are several additional MIL DC and VGA connector types with varying design characteristics to meet cost considerations and to provide users with the most design flexibility possible. For more information, please contact us.

|                    | Input                | Part no.   | Standard   |
|--------------------|----------------------|--|------------|
| Lockable Connector | DC Power<br>( Male ) | YM-Ext-461CP001<br>   | D-type 3W3 |
|                    | USB                  | LUSB - A111 - 00<br> | -          |

\*\*\* MIL - type or Lockable connectors above can be integrated with our LCD displays. Sale service just for connectors not provided.

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