

# User Manual 13" FHD 1920 x 1080 LCD





**AP-F13** Aluminum front bezel

**NAP-F13** Front NEMA4 / IP65



**DP-F13 Aluminum Front Panel** 

**OP-F13 Universal Open Frame** 



Designed and manufactured by Austin Hughes

### Legal Information

First English printing, July 2022

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 labeled 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.
  - $\hfill\square$  Repair or attempted repair by anyone not authorized by us.
  - □ Any damage of the product due to shipment.
  - □ Removal or installation of the product.
  - $\hfill\square$  Causes external to the product, such as electric power fluctuation or failure.
  - $\hfill\square$  Use of supplies or parts not meeting our specifications.
  - $\Box$  Normal wear and tear.
  - $\Box$  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 B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

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 :

- ① Disconnect the power cord.
- ② 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 :

- ① Disconnect the power cord.
- 2 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.

- ③ Gently wipe the surface. Use as little pressure as possible.
- ④ Wait until your monitor is completely dry before plugging it in and powering it up.

## < Part 1 > AP-F13 / NAP-F13 < 1.1 > Package Content

### AP-F13 / NAP-F13



## 13" 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 2 pcs
- M4\* 6mm screw x 4 pcs
- M4\* 50mm screw x 4 pcs

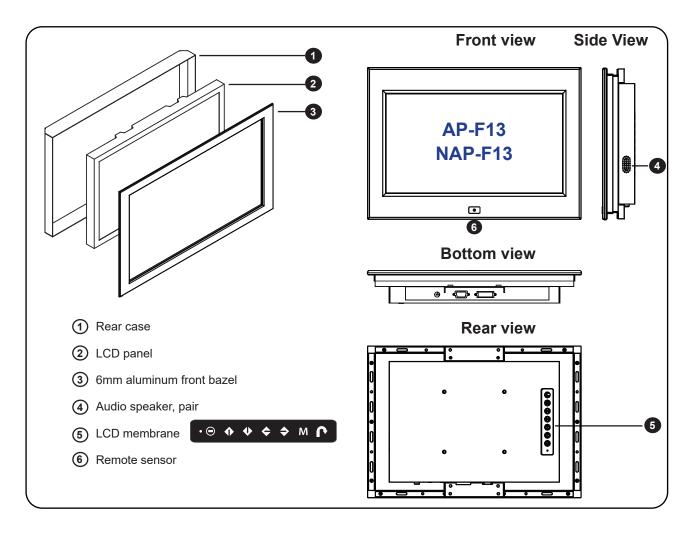
#### Basic I/O

Power	DVI-D	VGA	
Ø	0 <b>[]]]</b> 0	q <u></u> p	

#### Upgrade I/O with advanced features

Power	Audio		VGA	BNC
0	O O Out in	DP H	MI ( <u></u> )>	$\odot$

## < 1.2 > Structure Diagram



Model	Product Dimension (W x D x H)	Packing Dimension (W x D x H)	Net Weight	Gross Weight
AP-F13	355 x 54.9 x 252.3 mm	615 x 113 x 523 mm	- kg	- kg
NAP-F13	14 x 2.2 x 9.9 inch	24.2 x 4.4 x 20.6 inch	- Ib	- Ib

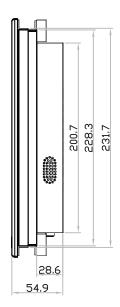
## < 1.2 > Dimension

### 13" FHD LCD Display

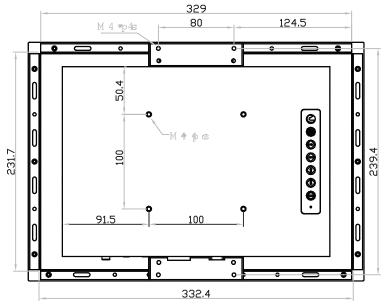
**Side View** 

#### **Front View**

**AP-F13 NAP-F13 EEE** 99 **EE** 

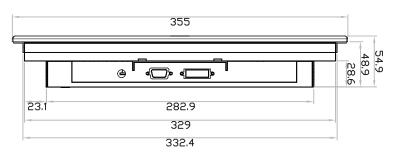


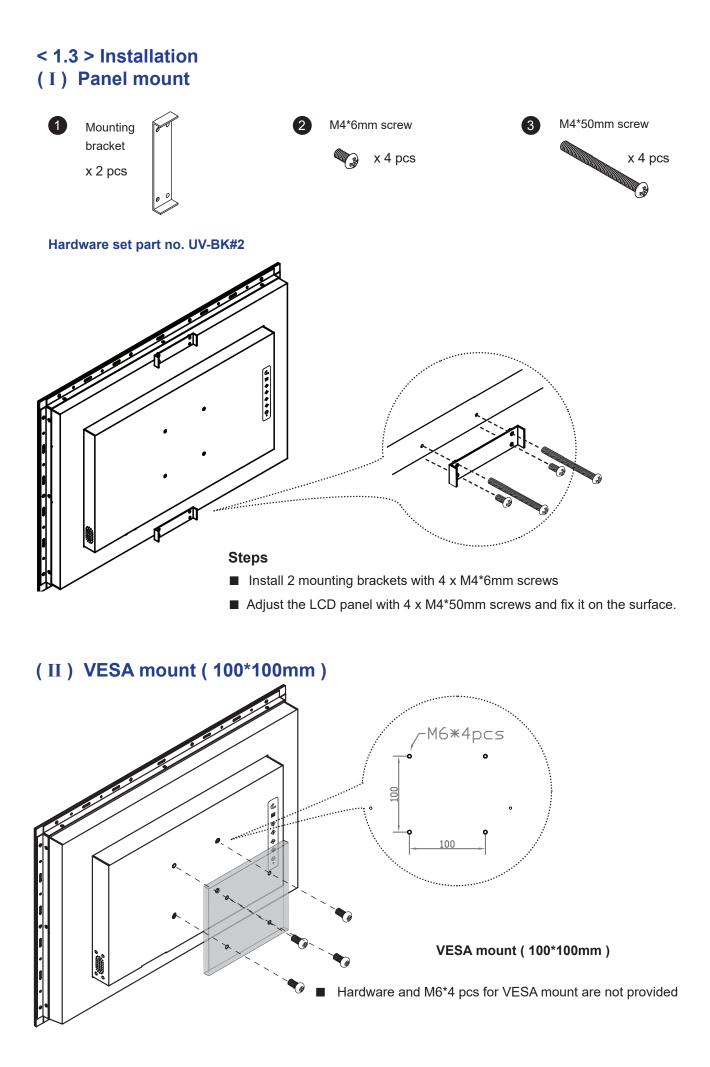
#### **Rear View**



#### UNIT : mm 1mm = 0.03937 inch

#### **Bottom View**





## < Part 2 > DP-F13 < 2.1 > Package Content

## **DP-F13**



13" FHD LCD Display X 1 6ft VGA cable X 1 Power cord X 1 Remote controller X 1

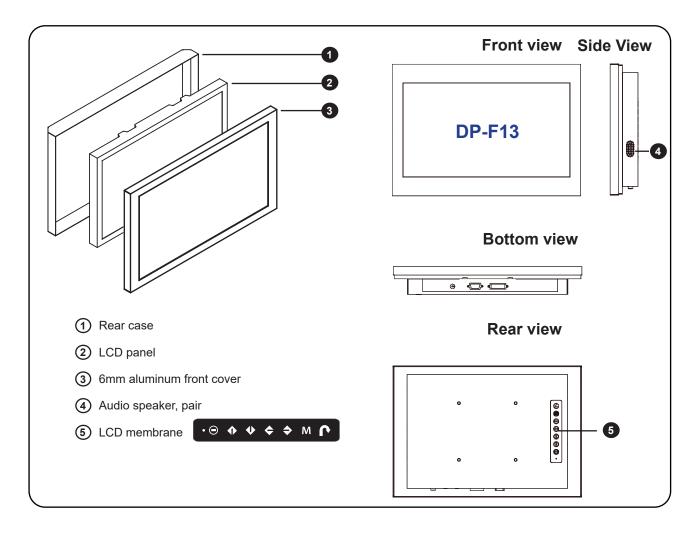
#### **Basic I/O**

Power	DVI-D VGA
O	

#### Upgrade I/O with advanced features

Power	Audio			VGA	BNC
0	O O Out in	DP	HDMI	q <del>}</del> >	$\odot$

## < 2.2 > Structure Diagram



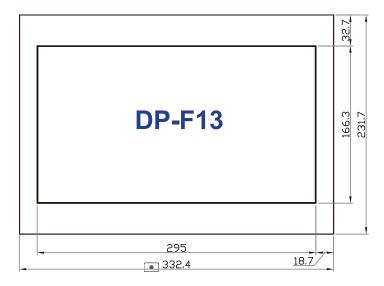
Model	Product Dimension (W x D x H)	Packing Dimension (W x D x H)	Net Weight	Gross Weight
DP-F13	332.4 x 50.2 x 231.7 mm	615 x 113 x 523 mm	- kg	- kg
	13.1 x 2 x 9.1 inch	24.2 x 4.4 x 20.6 inch	- Ib	- Ib

### 13" FHD LCD Display

## < 2.2 > Dimension

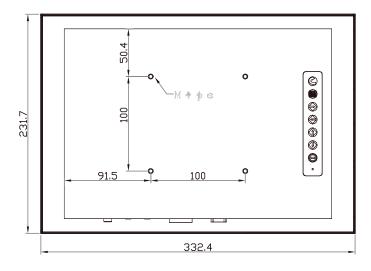
#### **Front View**

**Side View** 



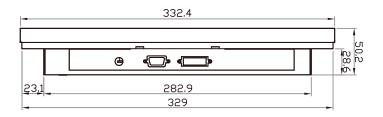


#### **Rear View**

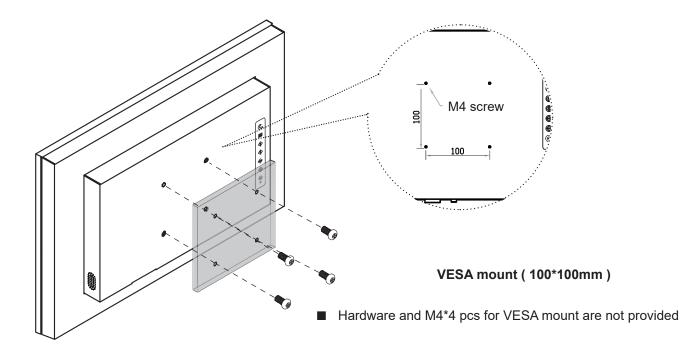


#### UNIT : mm 1mm = 0.03937 inch

#### **Bottom View**



## < 2.3 > VESA Installation



## < Part 3 > OP-F13 < 3.1 > Package Content

### **OP-F13**



13" FHD LCD Display X 1 6ft VGA cable X 1 Power adapter X 1 Power cord X 1

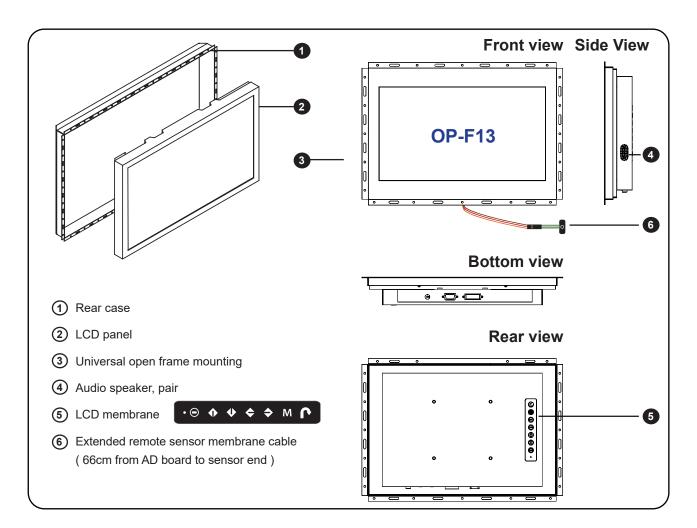
#### **Basic I/O**

Power	DVI-D	VGA	
O	<ul> <li>● (ⅢⅢ) ○</li> </ul>	q	

#### Upgrade I/O with advanced features

Power	Audio			VGA BNC
0	Out in	DP	HDMI	

## < 3.2 > Structure Diagram



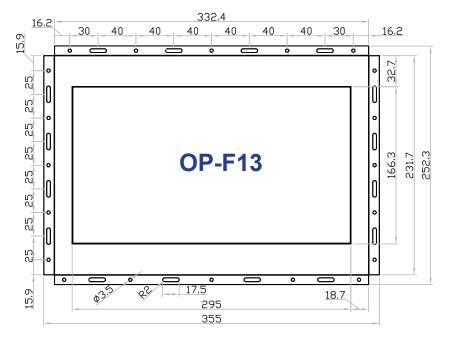
Model	Product Dimension (W x D x H)	Packing Dimension (W x D x H)	Net Weight	Gross Weight
OP-F13	355 x 50.2 x 252.3 mm	615 x 113 x 523 mm	- kg	- kg
	13.9 x 2 x 9.9 inch	24.2 x 4.4 x 20.6 inch	- Ib	- Ib

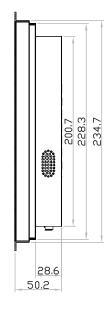
## < 3.2 > Dimension

## 13" FHD LCD Display

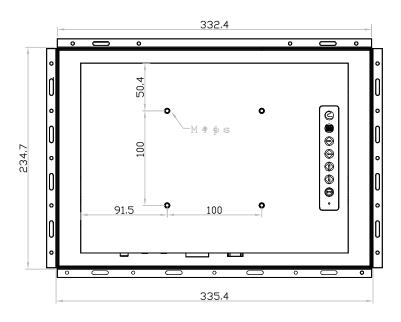
#### **Front View**

Side View

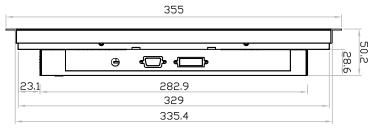




#### **Rear View**



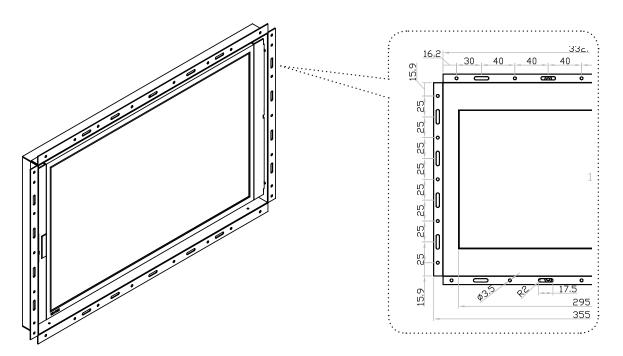
#### **Bottom View**



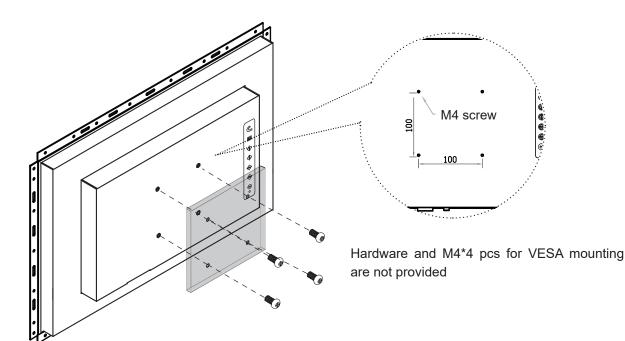
UNIT : mm 1mm = 0.03937 inch

## < 3.3 > Installation

## (I) Universal mount



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



## < Part 4 >

## < 4.1 > Product Specifications

### 13" FHD LCD Display

Mechanical Design	AP-F13	NAP-F13	DP-F13	OP-F13
Protection	6mm front bezel	NEMA 4 / IP65	front cover	open frame
Front Panel		-		
Rear Casing	Black, RAL 9005			
VESA mount	100 x 100 mm			
Universal mount	-		-	ready
Overhead titled wall-mount	option		option	-
Desktop stand	option		option	-

LCD Panel	
Panel Size ( diagonal )	13.3-inch Widescreen TFT color LCD
Native resolution	1920 x 1080
Brightness ( cd/m <sup>2</sup> )	300
Contrast Ratio ( typ. )	800 : 1
Colors	16.7M, 8-bit
Viewing Angle(L/R/U/D)	85/85/85
Response Time ( ms )	25
Dot pitch ( mm )	0.1529
Display Area(mm)	293.76H x 165.24V
Surface treatment	Anti-glare
Surface hardness	3Н
Backlight Type	LED
MTBF(hrs)	15,000

Video	
VGA	Analog 0.7Vp-p
DVI	DVI-D single link
Option	
НОМІ	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 / 750mV́
Output	
Connector	3.5mm stereo jack 30kΩ / 2.8V
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. 9W	
Power saving mode	Max. 2W	
Power button OFF	Max. 1W	

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

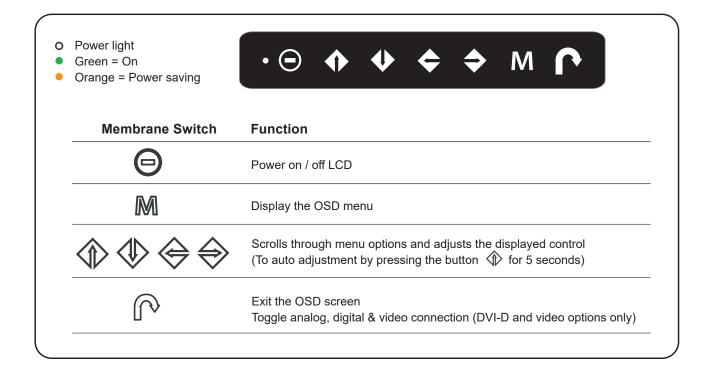
## < 4.1 > Product Specifications

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	AP-F13	NAP-F13	DP-F13	OP-F13
Product(W x D x H) mm	355 x 54.9 x 252.3		332.4 x 50.2 x 231.7	355 x 20.2 x 252.3
inch	14 x 2.	2 x 9.9	13.1 x 2 x 9.1	13.9 x 2 x 9.9
Packing (W x D x H )				
mm	615 x 113 x 523		615 x 113 x 523	615 x 113 x 523
inch	24.2 x 4.4 x 20.6		24.2 x 4.4 x 20.6	24.2 x 4.4 x 20.6
Net Weight	- kg / - lb	- kg / - lb	- kg / - lb	- kg / - lb
Gross Weight	- kg / - lb	- kg / - lb	- kg / - lb	- kg / - 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	
		1680 x 1050 x 60Hz	
		1440 x 900 x 60Hz	
		1360 x 768 x 60Hz	
		1280 x 1024 x 60Hz	
		1280 x 768 x 60Hz	
		1280 x 720 x 60Hz	
		1152 x 864 x 60Hz	
		1024 x 768 x 60Hz	
		800 x 600 x 60Hz	
		640 x 480 x 60Hz	
	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 )	
	Audio Signal	2ch Linear PCM	
Display port Input	PC Signal	1920 x 1080 x 60Hz	
		1680 x 1050 x 60Hz	
		1440 x 900 x 60Hz	
		1360 x 768 x 60Hz	
		1280 x 1024 x 60Hz	
		1280 x 768 x 60Hz	
		1280 x 720 x 60Hz	
		1152 x 864 x 60Hz	
		1024 x 768 x 60Hz	
		800 x 600 x 60Hz	
		640 x 480 x 60Hz	
	Audio Signal	2ch Linear PCM	



### 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

		PICTURE	HDMI 1920x1080@60.0Hz
PICTURE	BRIGHTNESS		70 >
	CONTRAST		<b>50</b> >
	BLACK LEVEL		<u> </u>
COLOR	ECO		STANDARD >
<b></b>			
OSDSET			
RESET			
MISC			
	▲/▼ : UP / DOWN	<b>∢/</b> ▶ : <del>-</del> / +	MENU : EXIT M52LW170DVI701IN

② F	osition
-----	---------

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 SCREEEN / 4:3 / 5:4 / 16:10

		POSITION	HDMI 1920x1080@60.0Hz
	H-POSITION	_	70 >
←ţ→	V-POSITION		50 >
POSITION	CLOCK		50 >
COLOR	PHASE		<b>50</b> >
	PICTURE SIZE		OFF $>$
OSD SET			
RESET			
MISC			
	▲/ <del>▼</del> : UP / DOWN	<b>∢/</b> ▶ : - ,	/ + MENU : EXIT M52LW170DVI701IN

### 3 Color

Color temperature	e: 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 Iuminous control	: Control the dynamic brightness

	COLO	R	HDMI 1920x1080@60.0Hz
	COLOR TEMPERATURE		WARM >
←	SHARPNESS		<b>48</b> >
POSITION	HUE		50 >
	SATURATION		50 >
COLOR	DYNAMIC LUMINOUS CONTRO	DL	OFF >
OSD SET			
RESET			
MISC			
	▲/ <del>▼</del> : UP / DOWN	<b>∢/</b> ▶ : <b>-</b> / +	MENU : EXIT M52LW170DVI701IN

### (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°

	OSD	SET	HDMI 1920x1080@60.0Hz
	LANGUAGE		
←ţ→	OSD H-POSITION		<b>50</b> >
POSITION	OSD V-POSITION		<b>50</b> >
	OSD TIME OUT		100 >
COLOR	OSD TRANSPARENCY		<b>0</b> >
	OSD ROTATION		OFF >
RESET			
MISC			
	▲/▼:UP / DOWN	<b>∢/</b> ▶ : <del>-</del> / +	MENU : EXIT M52LW170DVI701IN

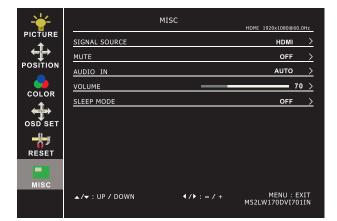
#### 5 Reset

Reset : Return the adjustment back to factory setting

-\		RESET	HDMI 1920x1080@60.0Hz
	IMAGE AUTO ADJUST		
	COLOR AUTO ADJUST		ļ,
	RESET		
COLOR			
OSD SET			
RESET			
MISC			
MISC	▲/▼ : UP / DOWN	<b>∢/</b> ▶ : <b>-</b> / +	MENU : EXIT M52LW170DVI701IN

### 6 MISC

Signal source	e : 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

### 13" FHD LCD Display

Options	AP / NAP	HAP / HNAP	DP	HDP	ОР	НОР
SDI ***	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
HDMI	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Audio	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Touchscreen	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
MCS multi-display control	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
DC Power	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
MIL-type / lockable connector	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Auto / switch dimming		$\checkmark$		$\checkmark$		$\checkmark$

Dimension will be changed if SDI / MCS required



\*\*\* About SDI

(1) The AD board will be upgraded, and this comes standard with HDMI, VGA, audio inputs and RC-2 remote controller.

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



Austin Hughes' SDI input is an ideal solution for the broadcastgrade 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.

SUI

		501
Power	Audio	VGA
O	O O HDMI out in	
	PC	out - in

\*\*\* For **SDI** option, the AD board comes standard with HDMI, VGA, audio inputs and RC-2 remote controller (please refer to P.20)

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

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

Compatible Video Format	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

Compatible Audio Format	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 / Asyn-
		chronized Video

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

## < 5.3 > Options : MCS

### 13" FHD LCD Display

## MCS ( Multi-display Control )

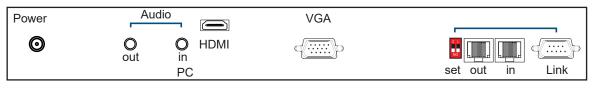


More control is always good. Especially when it is necessary and easy. Austin Hughes provides MCS solution to control the **OSD** of various UltraView LCD display up to 64 units.

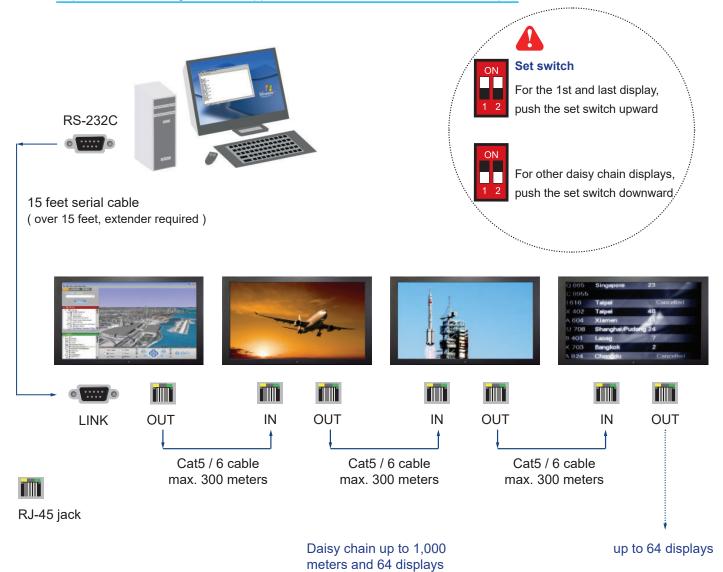
The RS-232C is used for the communication between the PC and the first display via a 15 feet serial cable while the CAN bus is used for the various LCD displays cascade together via CAT 5/6 cable, and daisy chain up to 1,000 meters.

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.





\*\*\* Please download the protocol of MCS control at : http://www.austin-hughes.com/support/usermanual/ultraview/UM-UV-MCS.pdf



## < 5.4 > Upgrade Options :

- HMDI
  - (HDMI 1.4, CEA-861-E)
- Audio

- Display Port (DP 1.0, HCDP 1.3) (Built-in Dual Stereo Speakers, 2W x 2) (3.5mm audio jacks for audio in & out )

Power	Audio		VGA	BNC
O	O O DP Out in	HDMI	¢)o	$\bigcirc$

\*\*\*

Upgrade option comes with RC-2 remote controller x 2 (please refer to P.21)

## < 5.5 > How to Use RC-2 Remote Controller 13" FHD LCD Display

1		8
2 —		
3—		
_		
4—	AUTO	
5—		(SELECT) (ASPECT)
6—		
0		
_		
7—	BACK	
20—	(SOURCE)	
21—		
•		
		Water proof
1	INPUT	Select the source
2	Ċ	Switches on or off the TV
1) 2) 3) 4) 5)	0 - 9	Only use in TV mode. Select channels. For channel numbers 10 and above, enter the second digit within two seconds.
4)	AUTO	Auto adjust
5)	MENU	Display the menu on the screen or go to the previous menu
		Go to the upper menu or select the previous value /
ଚ	▲ / ▼ / ◀ / ► / ENTER	Go to the next menu or select the next value / Decrease the setting value /
6)		Increase the setting value or enter to the select item setting
7)	PACK	Enter to the select item settings or excude the setting
	BACK	Back to previous value Turn on or off the speaker
<u>)</u>	Vol + / -	Increase or decrease the speaker volume
0	CH + / -	For TV model only, increase or decrease the channel number
1	FREEZE	Reserve for OEM model
2	- /	For setting input single or double digits
13	ASPECT	Adjust the screen size
4	SELECT	To select the existing item
5	SLEEP	Select the sleeping time
6	EXIT	Exit the menu or cancel
_	PIP functions	

	PIP functions	
17	PIP	Picture in picture
18	PIP AUDIO	To set the audio of in PIP mode
19	POSITION	To set the screen position in PIP mode
20	SOURCE	PIP Source
21	SWAP	Swap screen in PIP mode

# < 5.6 > Options : Touchscreen & driver



### F13" USB Touchscreen Specification

Model	TPC-10 Multi-touch	TRB e-Resistive	
Technology	Projected Capacitive	4-Wire Resistive	
Touch Point	10	Single	
Input Type	Finger or Capacitive Stylus	Finger or Stylus	
Resolution	4096 x 4096	2048 x 2048	
Touch Point Accuracy	± 2 mm	-	
Response Speed	< 5 ms	15 ms	
Activation Force	< 5 g	60-150g	
Surface Hardness	6H	ЗН	
Light Transmission	> 85%	> 75% ± 3%	
Haze 3% ↓		<12% ± 3%	
Durability	50 million touches	10 million touches	
Top Layer	1.1 mm Glass ITO Film		
Bottom Layer	0.7 mm Sensor Glass ITO Glass		
Thickness	2 mm	2.2 ± 0.2 mm	
Connector	USB	USB Type A	
Compatibility	Linux / Android / Windows / Mac	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

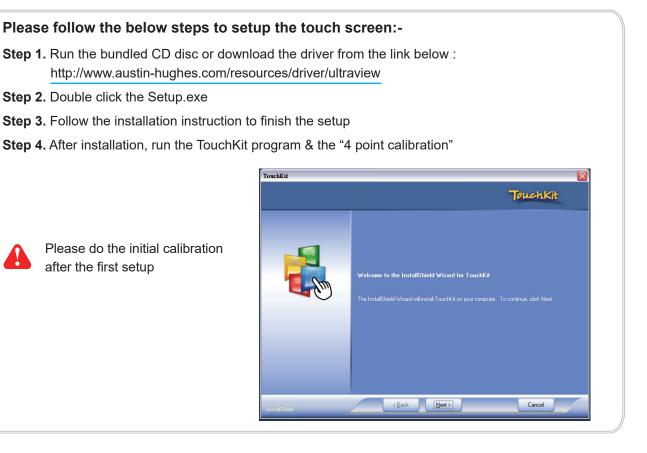
			•
DVI-D	VGA	Power	•
○ <b>ⅢⅢ</b> ○	¢[]Þ	O	

## < 5.6 > Options : Touchscreen & driver

## **TPC-10** Driver

Connect the USB cable from the USB port on the LCD to a computer. The touch screen supports easy Plug-and-Play operations. There is no need to install additional drivers on the computer.

#### **TRB Driver**



# < 5.7 > Options : DC Power $\circ \bigoplus_{==0}^{+-} \odot$

Model	12V	24V	48V	125V
Input rating				
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	7183 mA	3551 mA	1755 mA	749 mA
Output rating				
Output voltage:	12-Volt	12-Volt	12-Volt	12-Volt
Output current:	6.25A	6.25A	6.25A	6.25A
Efficiency	87%	88%	89%	91%

#### **\*\*\*** For DC power option :

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

## < 5.8 > Options : MIL-type or Lockable Connector

	Input	Part no	).	MIL Standard
MIL - type Connector	DC Power *** ( Male )	MS3470W8-33P		MIL - DTL - 26482
	VGA *** ( Male )	MS3470W14-15P	<b>S</b>	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	( Male )	YM-Ext-461CP001	D-type 3W3
	USB	LUSB - A111 - 00	-

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

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