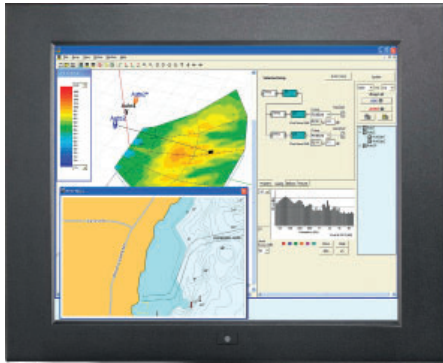# UltraView

dedicated LCD display solutions
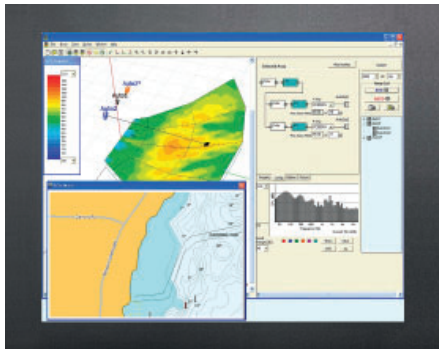
# User Manual   17" LCD

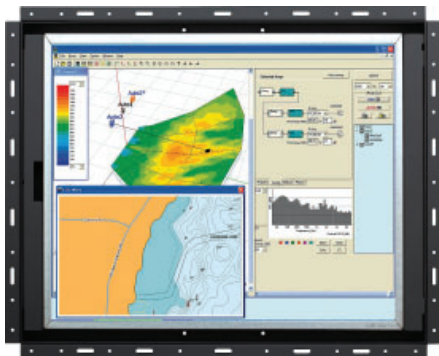**AP-17 / HAP-17**

**Aluminum front bezel**

**NAP-17 / HNAP-17**

**Front NEMA4 / IP65**

**DP-17 / HDP-17**

**Universal Mounting Open Frame**

**OP-17 / HOP17**

**Universal Mounting Open Frame**

FC  CE  RoHS  REACH

Designed and manufactured by Austin Hughes

## Legal Information

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 40º Celsius (104º 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.
  - ☐ 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 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.

# Contents

## 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.

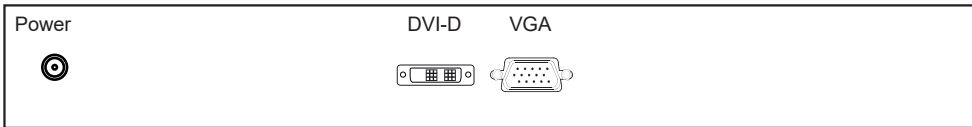**AP-17 / NAP-17 /**
**HAP-17 / HNAP-17**
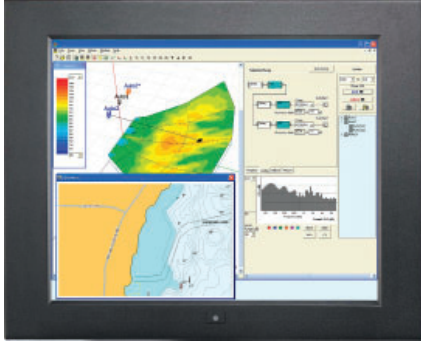
**17" LCD display  X 1**
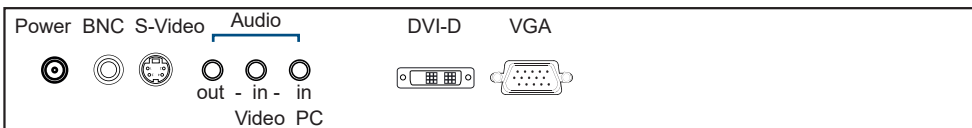**6ft VGA cable  X 1**
**Power adapter  X 1**
**Power cord  X 1**

**Mounting hardware  X 1 pack**

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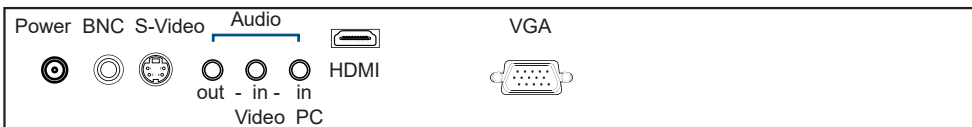
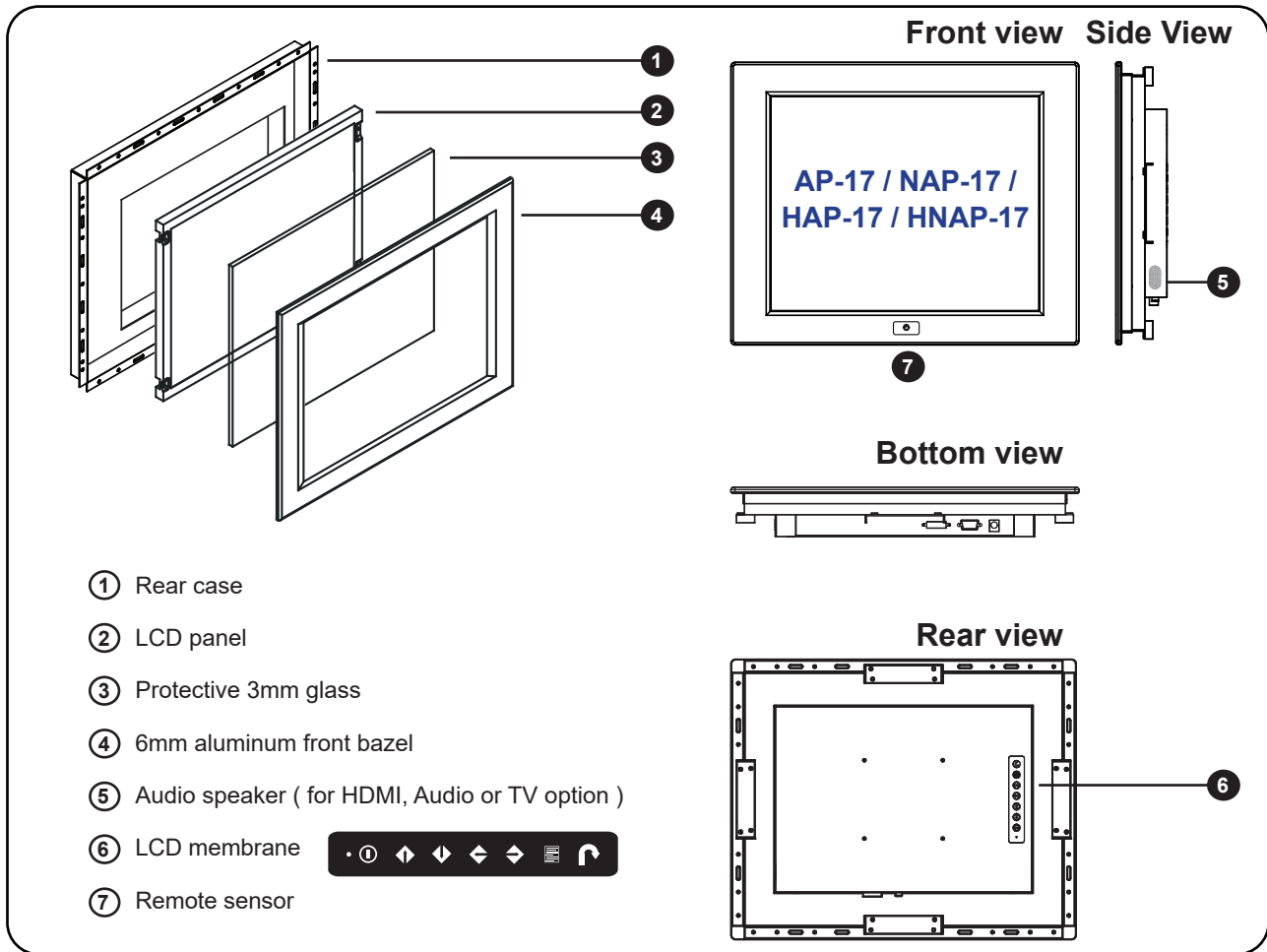- M4* 6mm screw x  8 pcs

- M4* 50mm screw x  8 pcs

**Basic I/O**

| Power | | DVI-D | VGA |
|---|---|---|---|

**AV2.2D upgrade I/O**

Power  BNC  S-Video    Audio       DVI-D    VGA

out - in - in
Video  PC

**AV2.2H upgrade I/O**

Power  BNC  S-Video    Audio       HDMI       VGA

out - in - in
Video  PC

# < 1.2 > Structure Diagram



**Front view**  **Side View**

AP-17 / NAP-17 /
HAP-17 / HNAP-17

① Rear case

② LCD panel

③ Protective 3mm glass

④ 6mm aluminum front bazel

⑤ Audio speaker ( for HDMI, Audio or TV option )
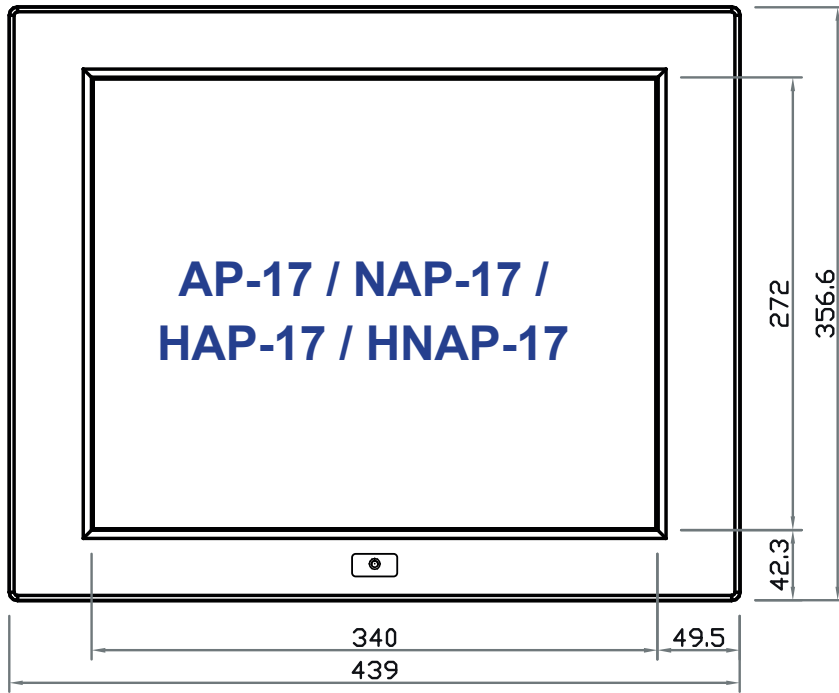
⑥ LCD membrane

⑦ Remote sensor

**Bottom view**

**Rear view**

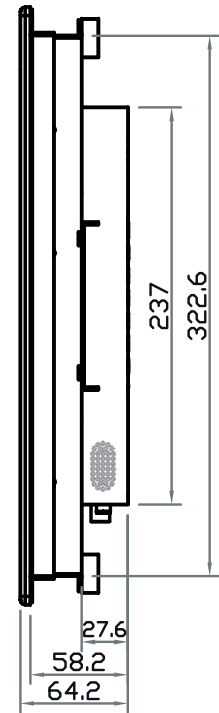| Model | Product Dimension (W x D x H) | Packing Dimension (W x D x H) | Net Weight | Gross Weight |
|---|---|---|---|---|
| AP-17 NAP-17 HAP-17 HNAP-17 | 439 x 64.2 x 356.6 mm 17.3 x 2.5 x 14 inch | 615 x 113 x 523 mm 24.2 x 4.4 x 20.6 inch | 6.6 kg 14.5 lb | 9.2 kg 20.2 lb |

**Front View**

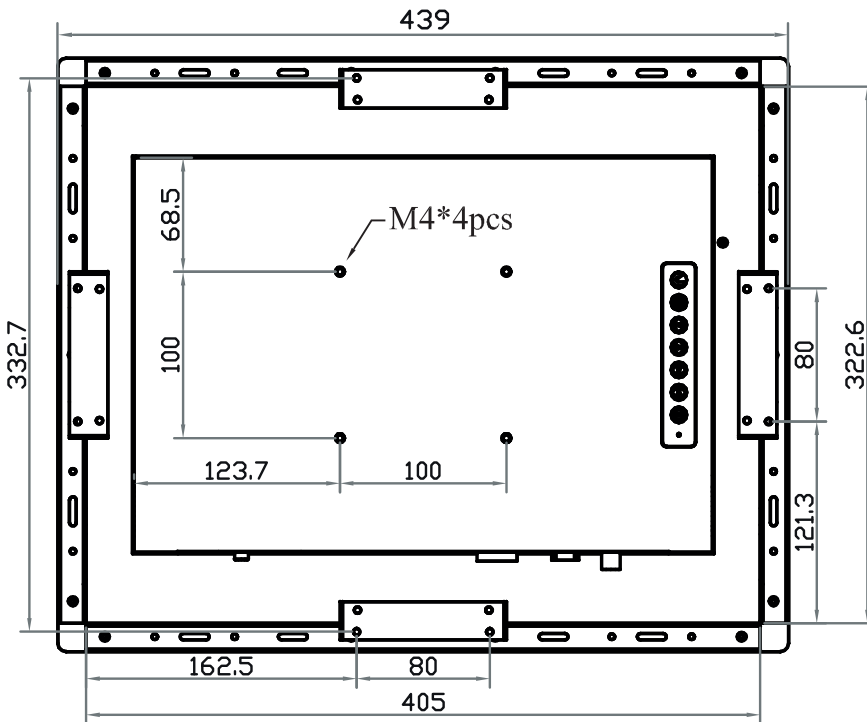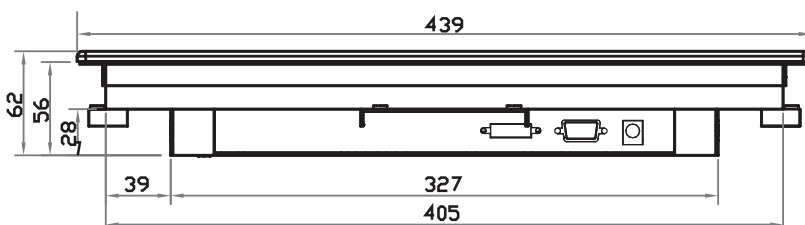**AP-17 / NAP-17 / HAP-17 / HNAP-17**

272

356.6

42.3

340

49.5

439

**Side View**

237

322.6

27.6

58.2

64.2

UNIT : mm
1mm = 0.03937 inch

**Rear View**

439

68.5

M4*4pcs

100

123.7

100

332.7

322.6

80

121.3

162.5

80

405

**Bottom View**

439

62

56

28

39

327

405

# < 1.3 > Installation
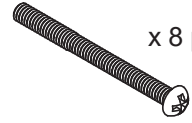## ( I ) Panel mount

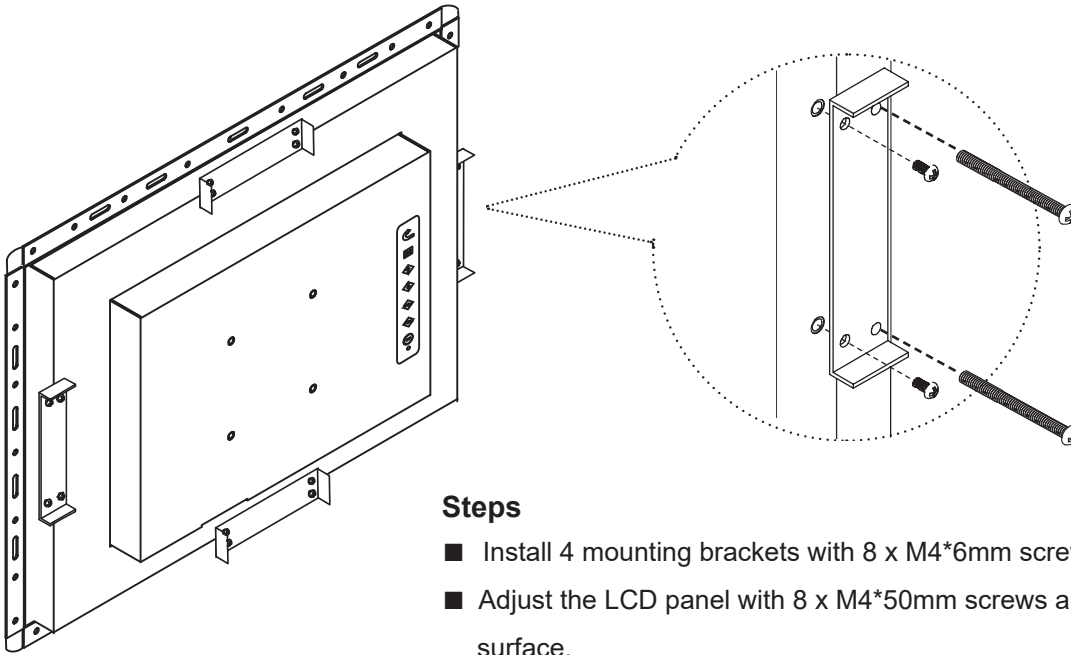**1**   Mounting bracket

x 4 pcs
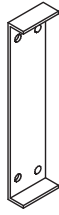
**2**   M4*6mm screw

x 8 pcs

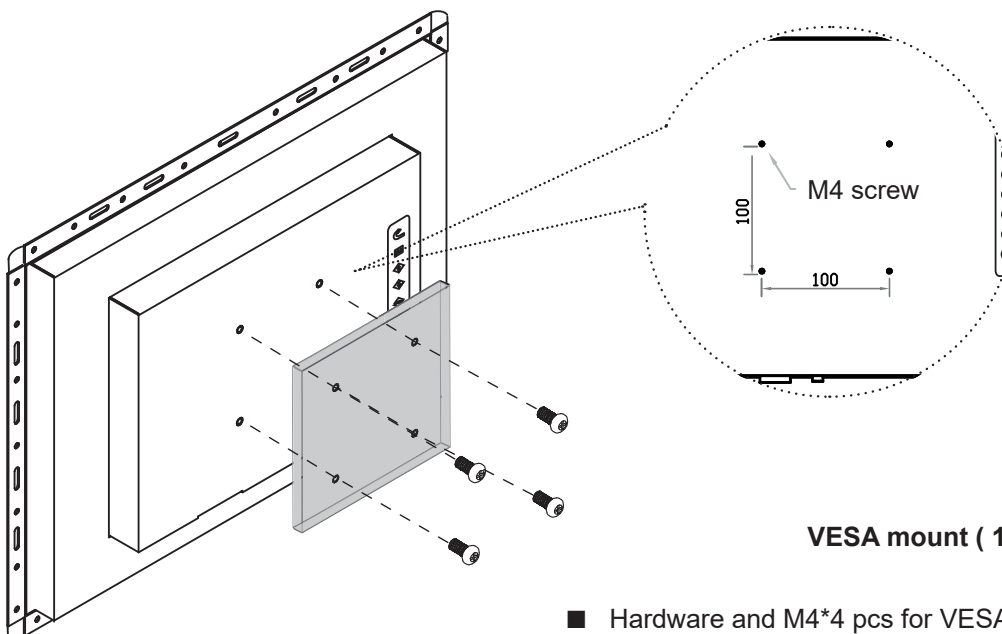**3**   M4*50mm screw

x 8 pcs

**Hardware set part no. UV-BK#2**

### Steps

■ Install 4 mounting brackets with 8 x M4*6mm screws

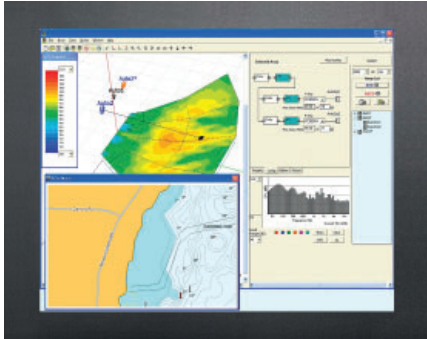■ Adjust the LCD panel with 8 x M4*50mm screws and fix it on the surface.

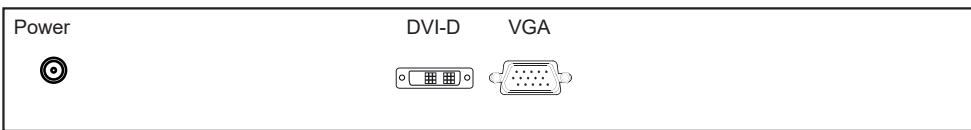## ( II ) VESA mount ( 100*100mm )

M4 screw

100

100

**VESA mount ( 100*100mm )**

■ Hardware and M4*4 pcs for VESA mount are not provided

**DP-17 / HDP-17**



**17" LCD display  X 1**
**6ft VGA cable  X 1**
**Power adapter  X 1**
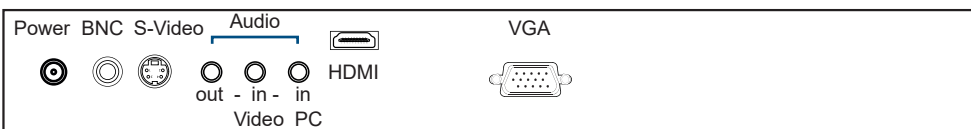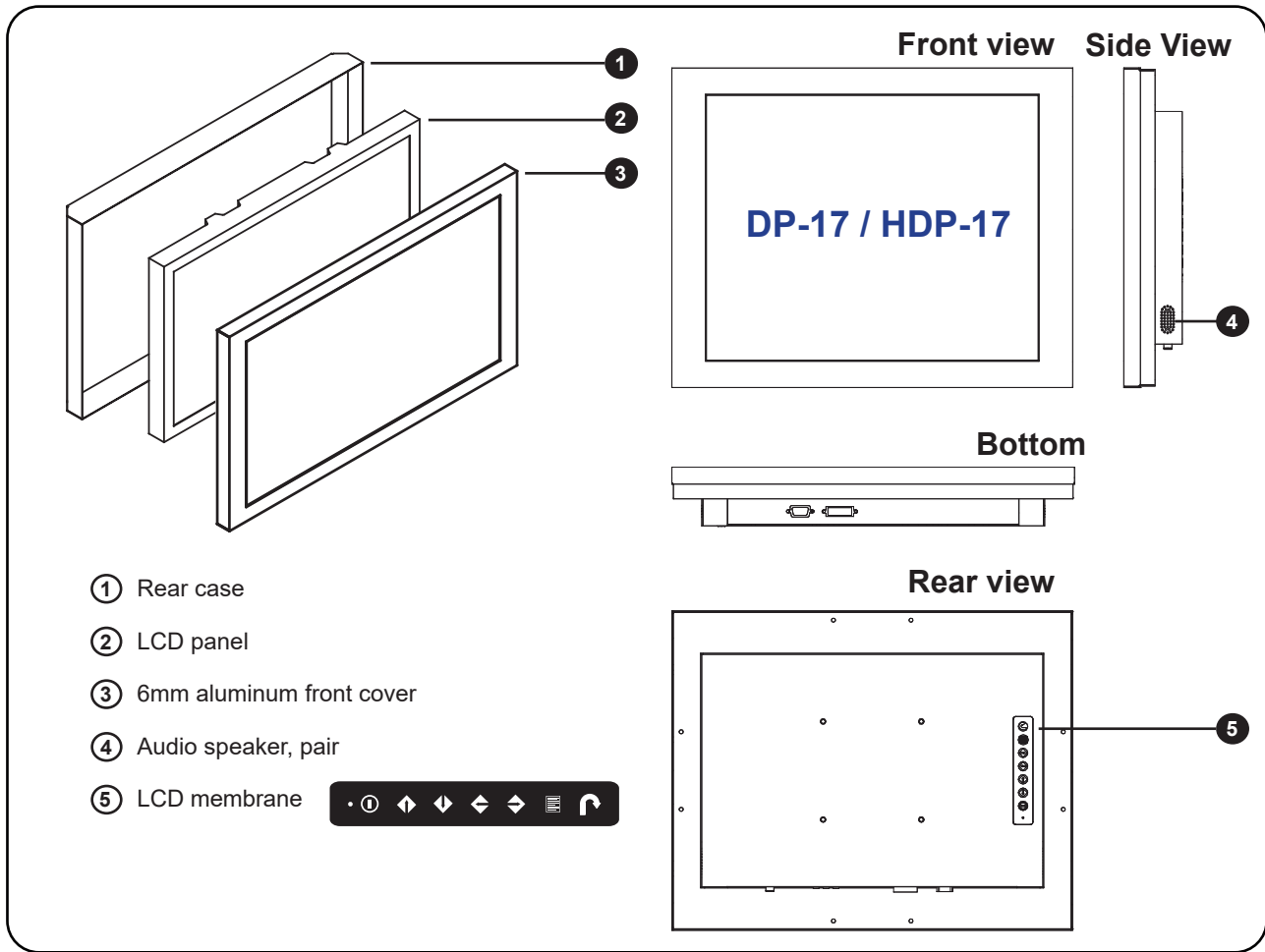**Power cord  X 1**

**Basic I/O**

| Power | | DVI-D | VGA |

**AV2.2D upgrade I/O**

Power  BNC  S-Video  Audio  DVI-D  VGA

out - in - in
Video  PC

**AV2.2H upgrade I/O**

Power  BNC  S-Video  Audio  HDMI  VGA

out - in - in
Video  PC

## < 2.2 > Structure Diagram



**Front view**　　**Side View**

**DP-17 / HDP-17**

**Bottom**

**Rear view**

① Rear case

② LCD panel

③ 6mm aluminum front cover

④ Audio speaker, pair

⑤ LCD membrane
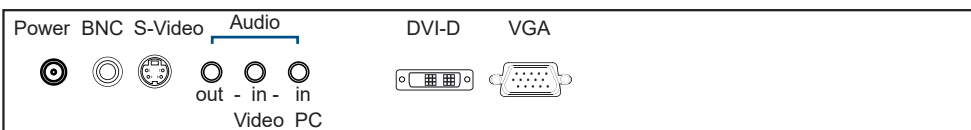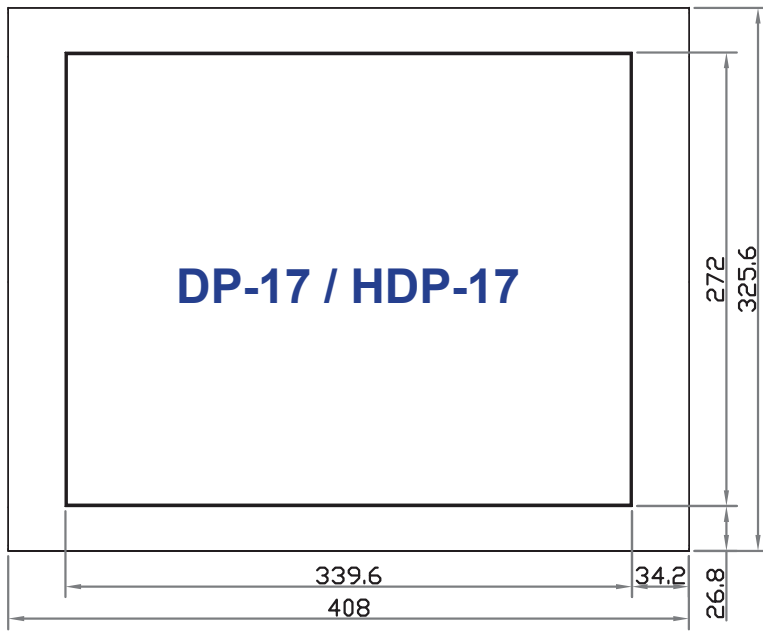
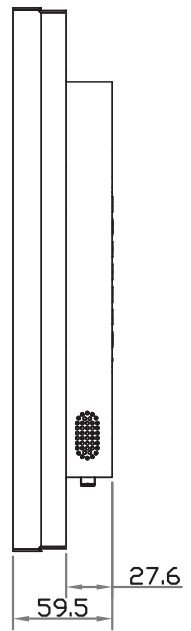| Model | Product Dimension (W x D x H) | Packing Dimension (W x D x H) | Net Weight | Gross Weight |
|---|---|---|---|---|
| **DP-F17** **HDP-F17** | 408 x 59.5 x 325.6 mm 16.1 x 2.3 x 12.8 inch | 615 x 113 x 523 mm 24.2 x 4.4 x 20.6 inch | 5.8 kg 12.8 lb | 8.4 kg 18.5 lb |

**Front View**

**Side View**



DP-17 / HDP-17

272
325.6
339.6
34.2
408
26.8
59.5
27.6

**Rear View**

UNIT : mm
1mm = 0.03937 inch



M4*4pcs
M4*4pcs
79
100
100
79
389

**Bottom View**



408
59.5
27.6
347.4

## < 2.3 > VESA mount Installation
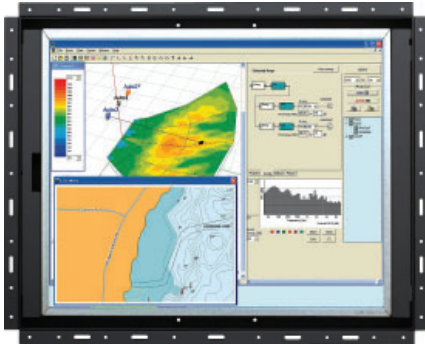
M4 screw

100

100

**VESA mount ( 100*100mm )**

■ Hardware and M4*4 pcs for VESA mount are not provided

**OP-17 / HOP-17**

**17" LCD display  X 1**
**6ft VGA cable  X 1**
**Power adapter  X 1**
**Power cord  X 1**
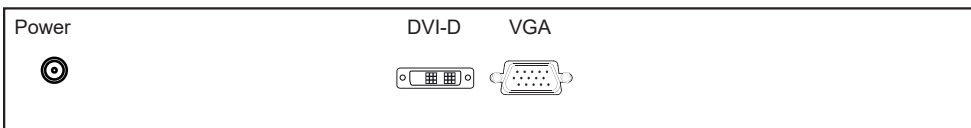
**Basic I/O**

| Power | | DVI-D | VGA |
|---|---|---|---|

**AV2.2D upgrade I/O**

Power  BNC  S-Video   Audio      DVI-D   VGA

out  -  in  -  in
Video  PC

**AV2.2H upgrade I/O**

Power  BNC  S-Video   Audio     HDMI     VGA

out  -  in  -  in
Video  PC

## < 3.2 > Structure Diagram



**Front view**  **Side View**

OP-17 / HOP-17

**Bottom view**

**Rear view**

① Rear case

② LCD panel

③ Audio speaker ( for HDMI, Audio or TV option )

④ Universal open frame mounting

⑤ LCD membrane

⑥ Extended remote sensor membrane cable
  ( 66cm from AD board to sensor end )
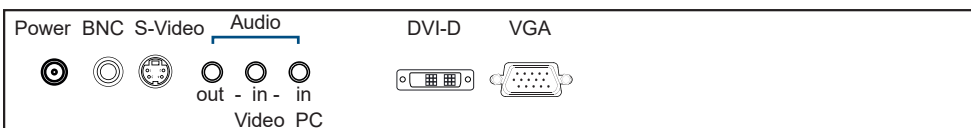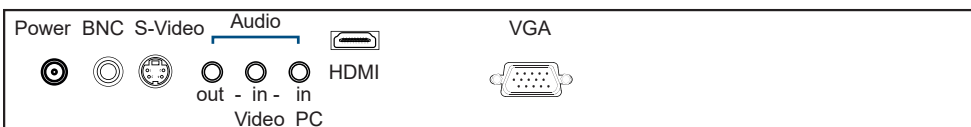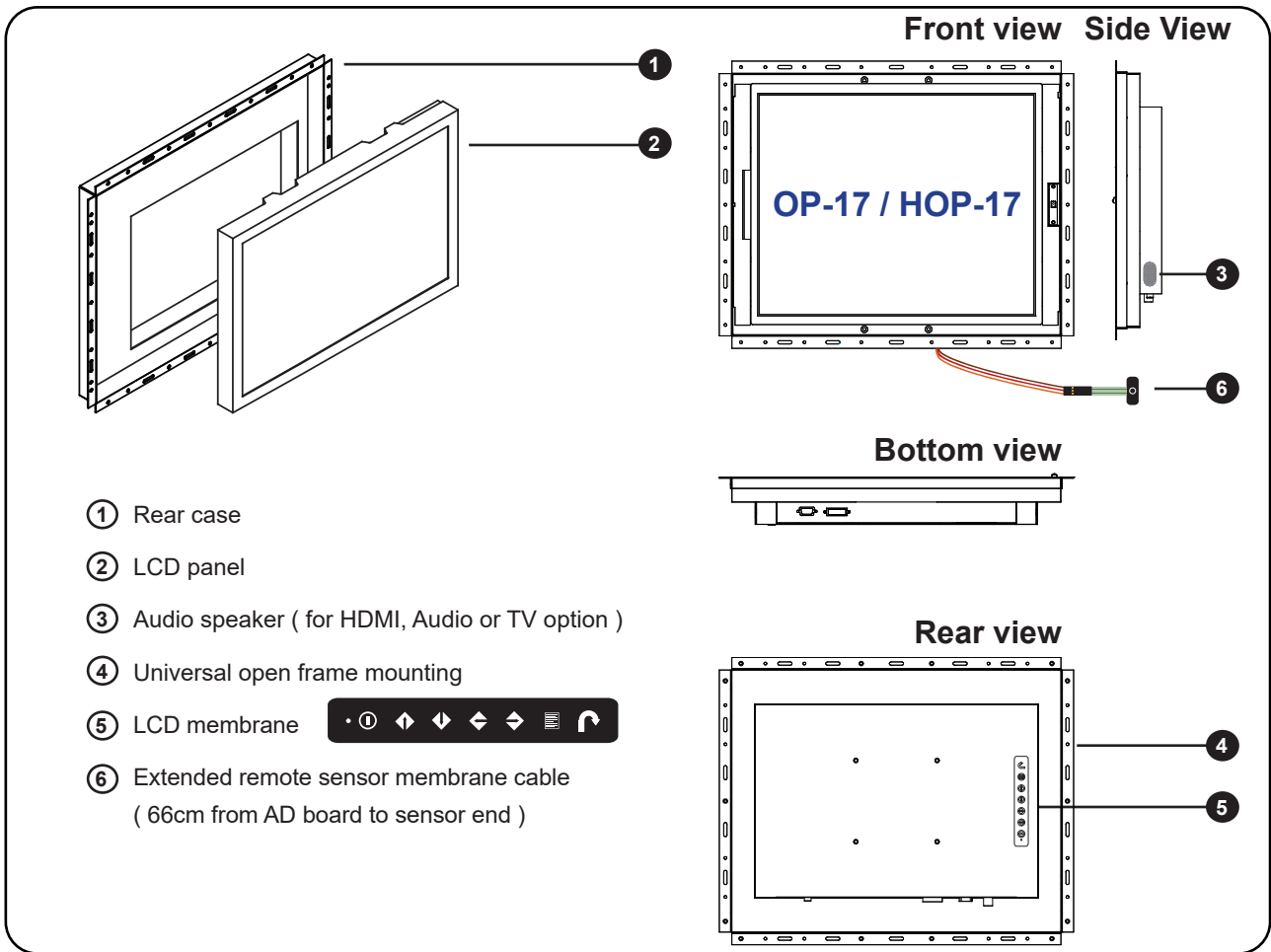
| Model | Product Dimension (W x D x H) | Packing Dimension (W x D x H) | Net Weight | Gross Weight |
|---|---|---|---|---|
| **OP-17** **HOP-17** | 436 x 58.2 x 353.6 mm 17.2 x 2.3 x 13.9 inch | 615 x 113 x 523 mm 24.2 x 4.4 x 20.6 inch | 4.9 kg 10.8 lb | 7.5 kg 16.5 lb |

**Front View**

**Side View**

OP-17 / HOP-17

**Rear View**

M4*4pcs

UNIT : mm
1mm = 0.03937 inch

**Bottom View**

## < 3.3 > Installation

## ( I )  Universal mount



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



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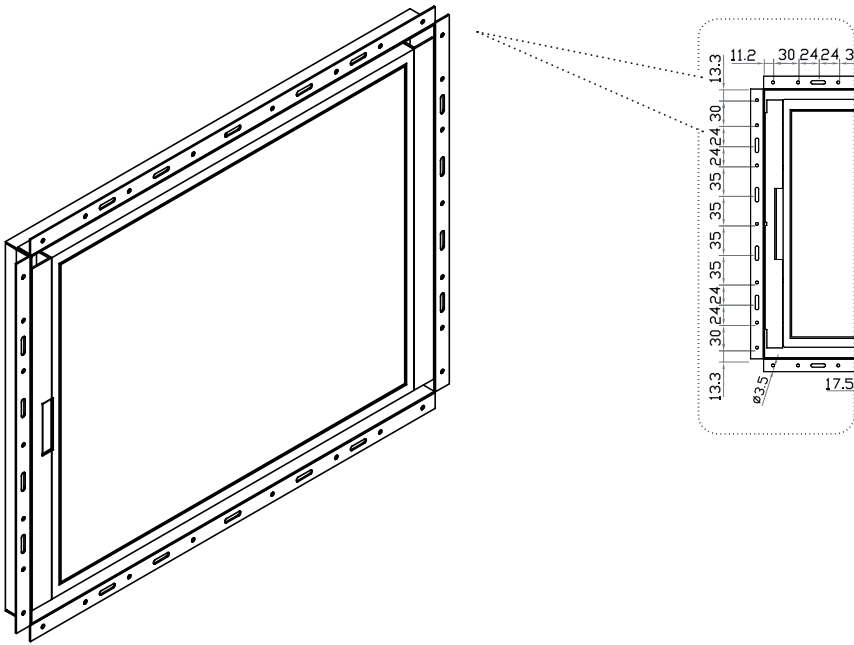
Hardware and M4*4 pcs for VESA mounting are not provided

## < 4.1 > Product Specifications

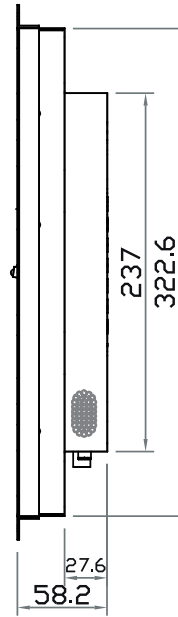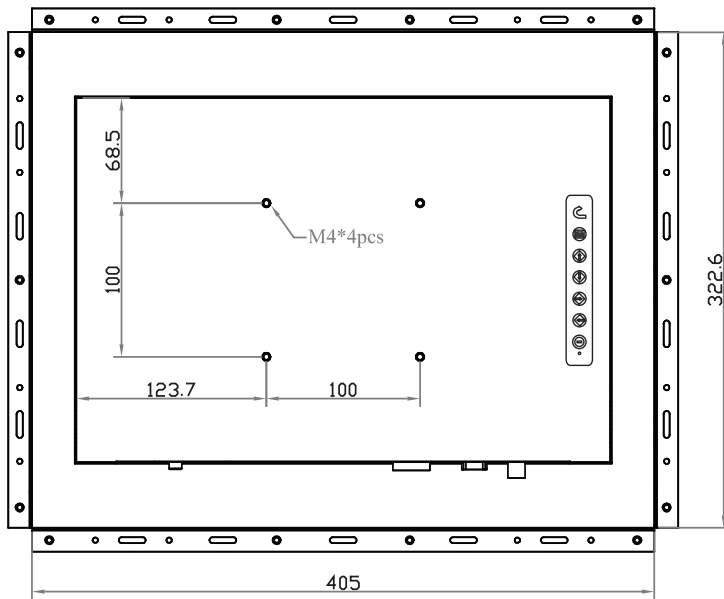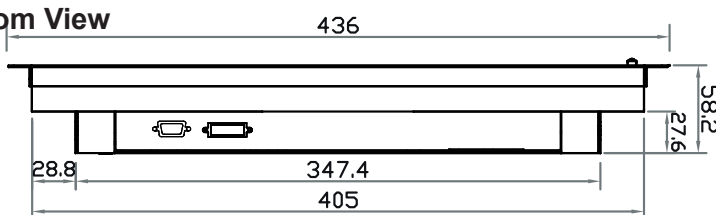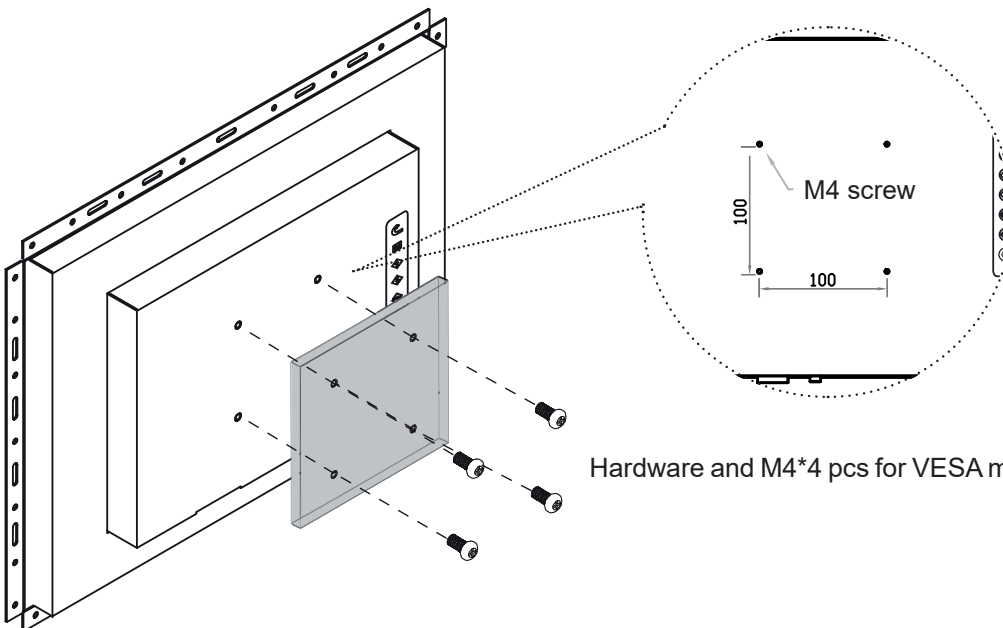| Mechanical Design | AP-17 / HAP-17 | NAP-17 / HNAP-17 | DP-17 / HDP-17 | OP-17 / HOP-17 |
|---|---|---|---|---|
| Protection | 6mm front bezel | NEMA 4 / IP65 | front cover | open frame |
| Front Panel | Black, RAL 9005 | | | - |
| Rear Casing | Black, RAL 9005 | | | |
| VESA mount | 100 x 100 mm | | | |
| Universal mount | - | | - | ready |
| Desktop stand | option | | option | - |
| Panel mount | bundled | | - | - |

| LCD Panel | Standard | Sunlight Readable |
|---|---|---|
| Brightness ( cd/m$^2$ ) | 250 | 1000 |
| Surface treatment | Haze 25%, Hard-coating | Anti-glare |
| MTBF ( hrs ) | 30,000 | 50,000 |
| Panel Size ( diagonal ) | 17-inch TFT color LCD | |
| Native resolution | 1280 x 1024 | |
| Contrast Ratio ( typ. ) | 1000 : 1 | |
| Colors | 16.7 M | |
| Viewing Angle ( L/R/U/D ) | 85/85/80/80 | |
| Response Time ( ms ) | 5 | |
| Dot pitch ( mm ) | 0.264 | |
| Display Area ( mm ) | 337.92H x 270.33V | |
| Surface hardness | 3H | |
| Backlight Type | LED | |

| Video | |
|---|---|
| VGA | Analog 0.7Vp-p |
| DVI | DVI-D single link |
| Option HDMI | HDMI 1.2 / HDCP 1.1 |
| Composite ( BNC ) | NTSC & PAL |
| S-Video ( 4-pin ) | NTSC & PAL |

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

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

| Power | Standard | Sunlight Readable |
|---|---|---|
| Input | Auto-sensing 100 to 240VAC, 50 / 60Hz | |
| Consumption: | | |
| Screen ON | Max. 22W | Max. 30W |
| Power saving mode | Max. 2W | Max. 2W |
| Power button OFF | Max. 1W | 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-17 / HAP-17 | NAP-17 / HNAP-17 | DP-17 / HDP-17 | OP-17 / HOP-17 |
|---|---|---|---|---|
| Product ( W x D x H ) mm | 439 x 64.2 x 356.6 | | 408 x 59.5 x 325.6 | 436 x 58.2 x 353.6 |
| inch | 17.3 x 2.5 x 14 | | 16.1 x 2.3 x 12.8 | 17.2 x 2.3 x 13.9 |
| 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 | 6.6 kg / 14.5 lb | 6.6 kg / 14.5 lb | 5.8 kg / 12.8 lb | 4.9 kg / 10.8 lb |
| Gross Weight | 9.2 kg / 20.2 lb | 9.2 kg / 20.2 lb | 8.4 kg / 18.5 lb | 7.5 kg / 16.5 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 | | |
|---|---|---|
| DVID / VGA Input | PC Signal | 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 |
| | | 640 x 400 x 70Hz |
| | | 640 x 350 x 70Hz |
| | Audio Signal | 2ch Linear PCM |
| HDMI Input | PC signal | Same as VGA |
| | HDMI 1.2 | 1280 x 720 x 50 / 60Hz ( 720p ) |
| | | 720 x 480 x 50 / 60Hz ( 576p / 480p ) |
| | Audio Signal | 2ch Linear PCM |

○ 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) |

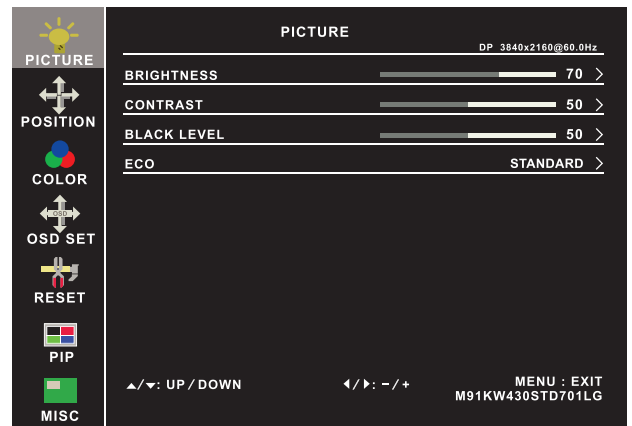# < 4.2 > On-screen Display Operation ( OSD )

## ① Picture

Brightness : Adjust the screen brightness

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

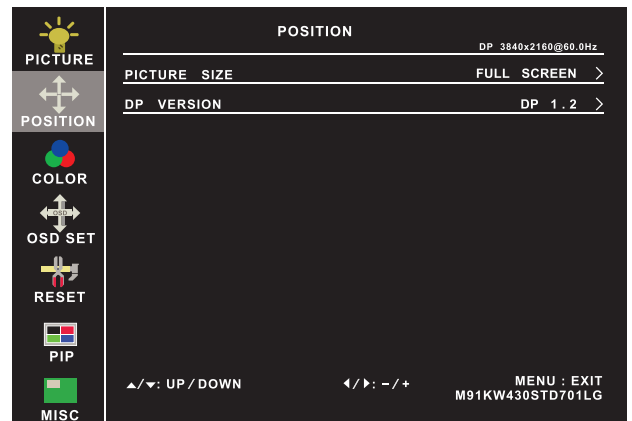Black level : Adjust background black level of the screen

Eco : Screen in power saving mode

| PICTURE | DP 3840x2160@60.0Hz |
|---|---|
| BRIGHTNESS | 70 > |
| CONTRAST | 50 > |
| BLACK LEVEL | 50 > |
| ECO | STANDARD > |

▲/▼: UP / DOWN    ◀/▶: − / +    MENU : EXIT
M91KW430STD701LG

## ② Position

Picture size : Adjust the image size
- Full Screen / 4:3 / 5:4 / Pixel to Pixel

DP version : Select the DP version

| POSITION | DP 3840x2160@60.0Hz |
|---|---|
| PICTURE SIZE | FULL SCREEN > |
| DP VERSION | DP 1.2 > |

▲/▼: UP / DOWN    ◀/▶: − / +    MENU : EXIT
M91KW430STD701LG

## ③ Color

Color temperature : User / Warm / Cool / 5400k mode and Red / Green / Blue color balance
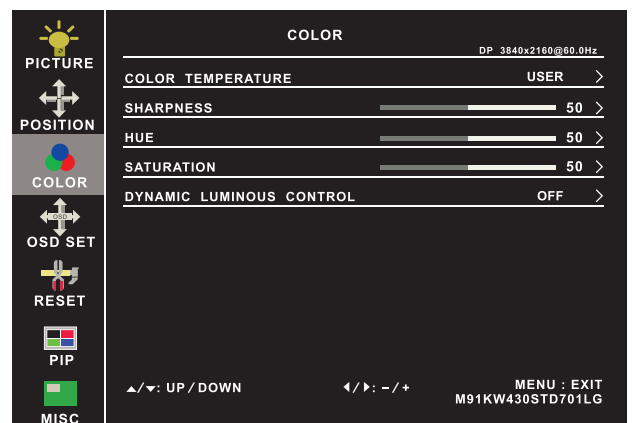
Sharpness : Adjust the image from weak to sharp

Hue : Adjust the screen hue value

Saturation : Adjust the saturation of the image color

Dynamic luminous control : Control the dynamic brightness

| COLOR | DP 3840x2160@60.0Hz |
|---|---|
| COLOR TEMPERATURE | USER > |
| SHARPNESS | 50 > |
| HUE | 50 > |
| SATURATION | 50 > |
| DYNAMIC LUMINOUS CONTROL | OFF > |

▲/▼: UP / DOWN    ◀/▶: − / +    MENU : EXIT
M91KW430STD701LG

## 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 size : Adjust the screen size - Normal / Small

OSD rotation : Rotate the screen - 90° / 180° / 270°

| OSD SET | DP 3840x2160@60.0Hz |
|---|---|
| LANGUAGE | |
| OSD H−POSITION | 50 > |
| OSD V−POSITION | 50 > |
| OSD TIME OUT | 60 > |
| OSD TRANSPARENCY | 0 > |
| OSD SIZE | NORMAL > |
| OSD ROTATION | OFF > |

▲/▼: UP / DOWN    ◀/▶: − / +    MENU : EXIT
M91KW430STD701LG

## ⑤   Reset

Reset      :   Return the adjustment back to factory setting



## ⑥   PIP ( Not Applicable to F17 / MF17 )

PIP mode      : Enter into PIP / PBP setting - PIP MODE /
               PBP 2WIN ( Main screen + 1 sub screen ) /
               PBP 3WIN ( Main screen + 2 sub screen ) /
               PBP 4WIN ( Main screen + 3 sub screen )
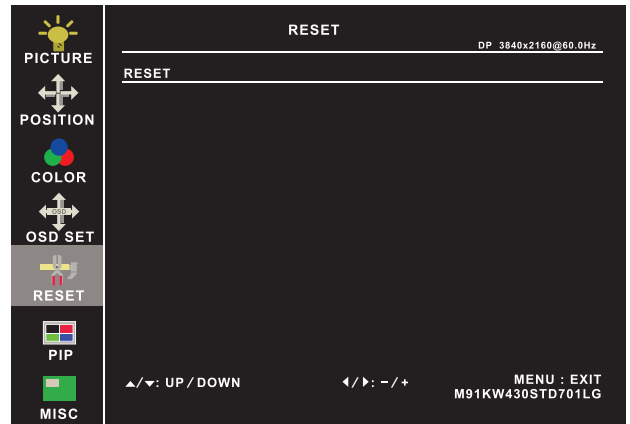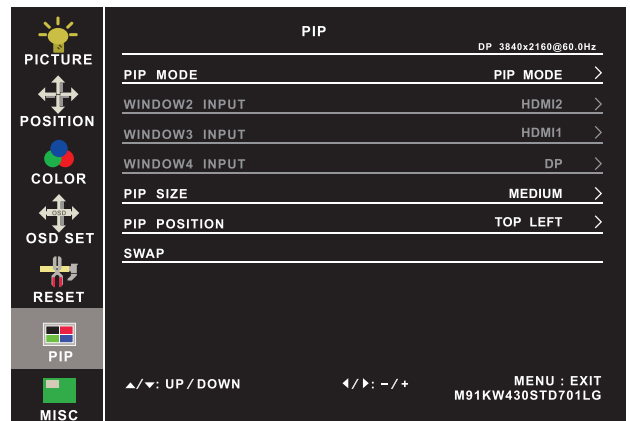               Select the signal input of each sub screen

PIP size      :  Adjust the size of the Sub screen
               - Small / Medium / Large / Huge

PIP position      : Adjust the position of the Sub screen
               - Top Left / Top Right / Bottom Left / Bottom Right

Swap      : Swap the input signal of PIP / PBP sub screen



## ⑦   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
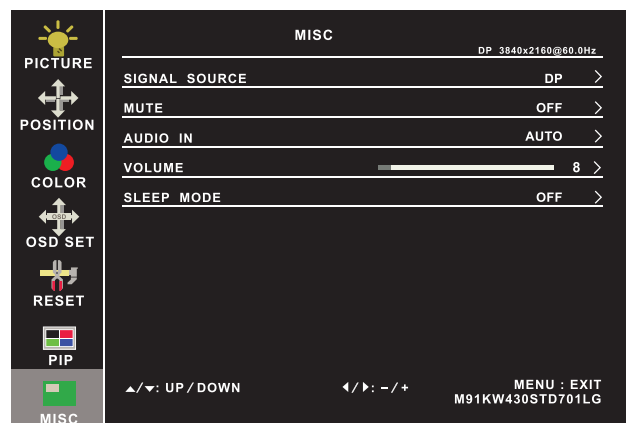


## Options on Reset page

Rotation      :  Rotate the image in Full screen or 1:1
               - 90° / 180° / 270°

Picture size :  Adjust the image size in Full screen or 1:1

# < Part 5 > Option
# < 5.1 > Option Table

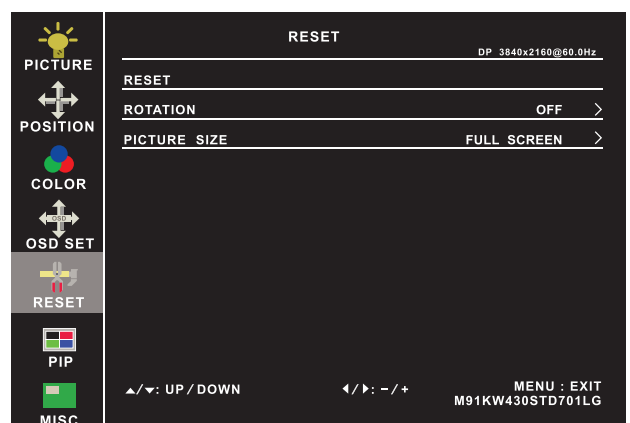| Options | AP / NAP | HAP / HNAP | DP | HDP | OP | HOP |
|---|---|---|---|---|---|---|
| SDI *** | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| HDMI ** or DVI-D | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| S-Video * + Composite ( BNC ) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Audio | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Touchscreen | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| MCS multi-display control | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| DC Power | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| MIL-type / lockable connector | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Quad display | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| TV ( Analog ) * | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Auto / switch dimming | | ✓ | | ✓ | | ✓ |

⚠️ *** **About SDI**

**( 1 ) The AD board will be upgraded to version 3.0, and this comes standard with HDMI, DVI-D, VGA, S-Video, BNC, audio inputs and RC-2 remote controller.**

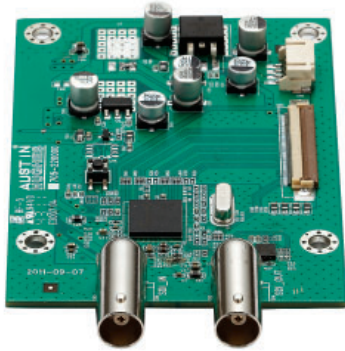** **About HDMI and DVI-D**

**( 1 ) For AV2.2 upgrade, either HDMI or DVI-D is provided.**

**( 2 ) If the user needs HDMI and DVI-D, AV3.0 upgrade can be applied.**

\* **Remote Controller**

**( 1 ) AV2.2 upgrade comes with RC-2 remote controller.**

**( 2 ) TV option comes with RC-2 remote controller.**
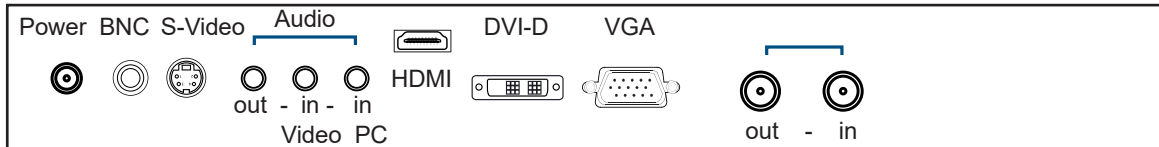
Austin Hughes' SDI input is an ideal solution for the broadcast-grade video and high resolution CCTV market.

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**

Power  BNC  S-Video  Audio                DVI-D   VGA

out - in - in        HDMI

Video  PC

out  -  in

\*\*\* For **SDI** option, the AD board will be upgraded to AV3.0, and this comes standard with HDMI, DVI-D, VGA, S-Video, BNC, audio inputs and RC-2 remote controller ( please refer to P.25 ). Casing dimensions will be changed.

| 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 / Asynchronized Video |

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

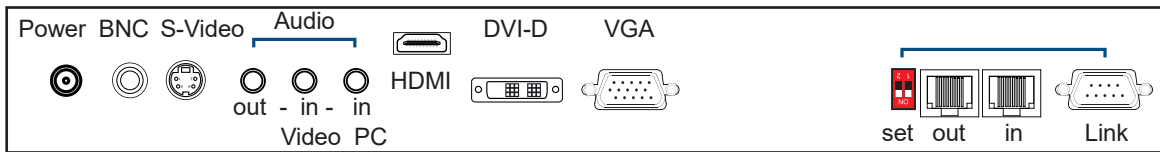# < 5.3 > Options : MCS ( Multi-display Control )

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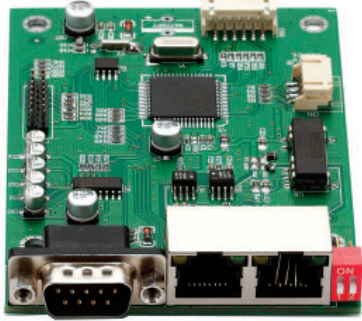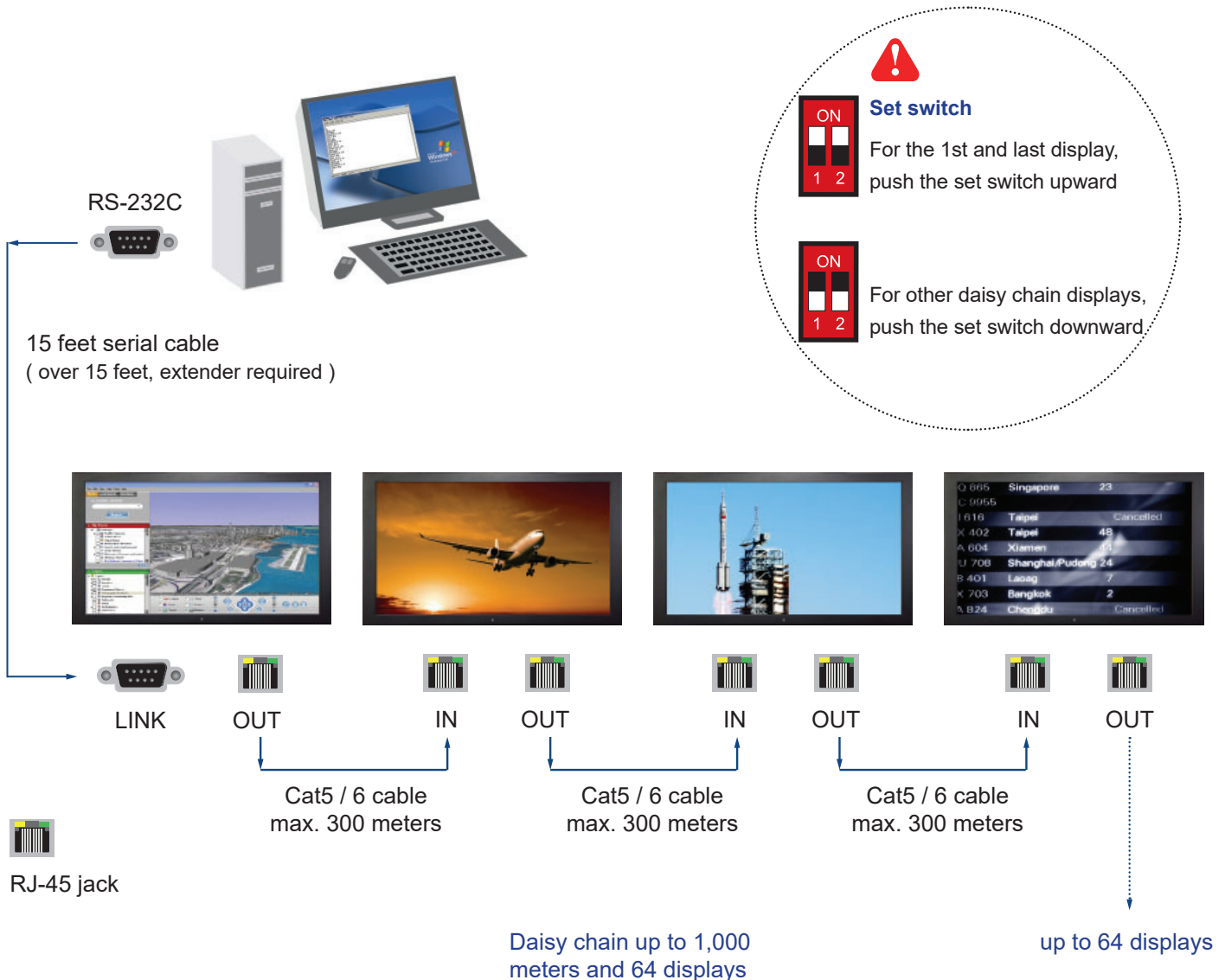
The RS-232C is used for the communication between the PC and the first display via a 15 feet serial cable while the CAN bus is used for the various LCD displays cascade together via CAT 5/6 cable, and daisy chain up to 1,000 meters.

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.
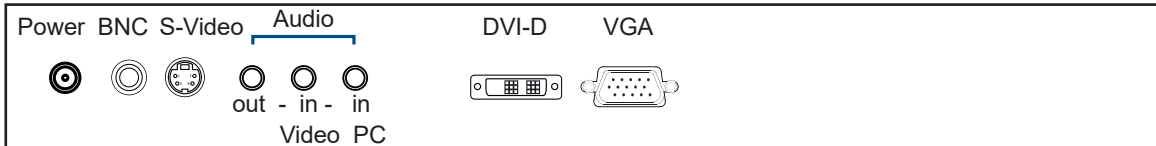
**MCS**

| Power | BNC | S-Video | Audio | | | HDMI | DVI-D | VGA | | set | out | in | Link |

out - in - in
Video   PC

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

**Set switch**

For the 1st and last display, push the set switch upward

For other daisy chain displays, push the set switch downward.

RS-232C

15 feet serial cable
( over 15 feet, extender required )

LINK   OUT      IN   OUT      IN   OUT      IN   OUT

Cat5 / 6 cable
max. 300 meters

Cat5 / 6 cable
max. 300 meters

Cat5 / 6 cable
max. 300 meters

RJ-45 jack

Daisy chain up to 1,000 meters and 64 displays
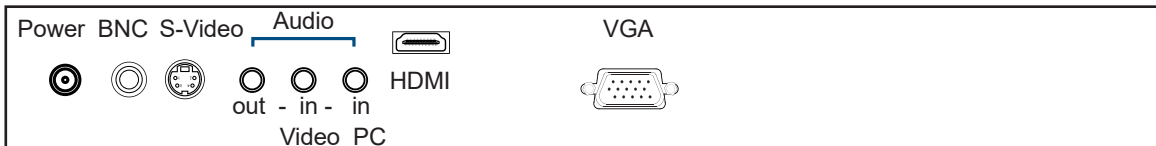
up to 64 displays

## AV2.2D Upgrade Options

- **DVI-D**  ( DVI-D TMDS single link      )
- **AV**      ( S-Video + Composite, BNC )
- **Audio**  ( Built-in Dual Stereo Speakers, 2W x 2 )
         ( 3.5mm audio jacks for audio in & out   )

| Power | BNC | S-Video | Audio | | | DVI-D | VGA |
| --- | --- | --- | --- | --- | --- | --- | --- |
| | | | out | - in - | in | | |
| | | | Video | | PC | | |

## AV2.2H Upgrade Options

- **HDMI**  ( HDMI 1.2, CEA-861-D          )
- **AV**       ( S-Video + Composite, BNC )
- **Audio**  ( Built-in Dual Stereo Speakers, 2W x 2 )
         ( 3.5mm audio jacks for audio in & out   )

| Power | BNC | S-Video | Audio | | | HDMI | VGA |
| --- | --- | --- | --- | --- | --- | --- | --- |
| | | | out | - in - | in | | |
| | | | Video | | PC | | |

**\*\*\***
**AV2.2 upgrade option comes with RC-2 remote controller x 1**  ( please refer to P.25 )
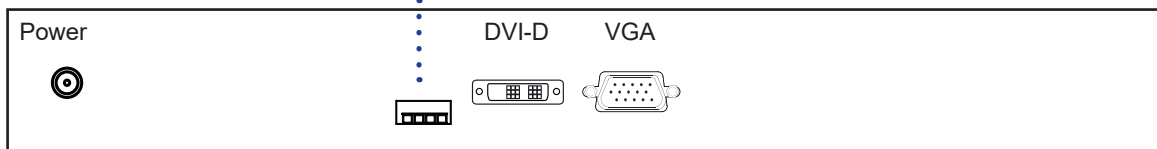
# < 5.5 > Options : Touchscreen & driver

## 17" USB Touchscreen Specification

| Model | TPC-10    Multi-touch | TRB    e-Resistive | TCB    e-Capacitive |
|---|---|---|---|
| Technology | Projected Capacitive | 5-Wire Resistive | Capacitive |
| Touch Point | 10 | Single | Single |
| Input Type | Finger or Capacitive Stylus | Finger or Stylus | Finger |
| Resolution | 2048 x 2048 | 2048 x 2048 | 2048 x 2048 |
| Touch Point Accuracy | ± 10 mm offset | - | - |
| Response Speed | Max. 20 ms | 15 ms | 20 ms |
| Activation Force | ≤ 10 g | ≤ 50 g | ≤ 50 g |
| Surface Hardness | 7H | 3H | 9H |
| Light Transmission | ≥ 88% | 80% ± 3% | 92% ± 2% |
| Haze | ≤ 2% | 8% ± 3% | 7% |
| Durability | > 100 million touches | 10 million touches | 300 million touches |
| Top Layer | 1.8 mm Tempered Glass | ITO Film | Glass |
| Bottom Layer | Film | ITO Glass | |
| Thickness | 2.2 mm | 2.2 ± 0.2 mm | 2.8 mm ± 10% |
| Connector | USB Type A | USB Type A | USB Type A |
| Compatibility | Windows 7 | Windows 7 / XP / Vista, Linux | |

- ■ Dimension will be changed if Multi-touch 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

Power          DVI-D    VGA

## 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 / TCB  Driver

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

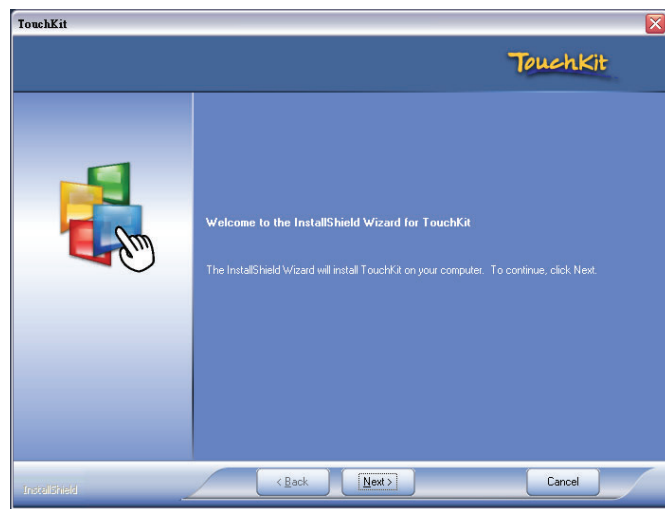**Step 1.** Run the bundled CD disc or download the driver from the link below :
http://www.austin-hughes.com/resources/driver/ultraview

**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

## < 5.6 > Options : DC Power
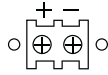
| Model | 12V | 24V | 48V | 125V |
|---|---|---|---|---|
| **Input rating** | | | | |
| Input voltage: | 12-Volt | 24-Volt | 48-Volt | 110-Volt |
| Input range: | 9 ~ 18V | 18 ~ 36V | 36 ~ 75V | 66 ~ 160V |
| Input current | | | | |
| - No load | 50 mA | 50 mA | 50 mA | 35 mA |
| - Full load | 4950 mA | 2450 mA | 1220 mA | 749 mA |
| **Output rating** | | | | |
| Output voltage: | 12-Volt | 12-Volt | 12-Volt | 12-Volt |
| Output current: | 4.16A | 4.16A | 4.16A | 6.25A |
| **Efficiency** | 84% | 85% | 85% | 91% |

**\*\*\*　For DC power option :**

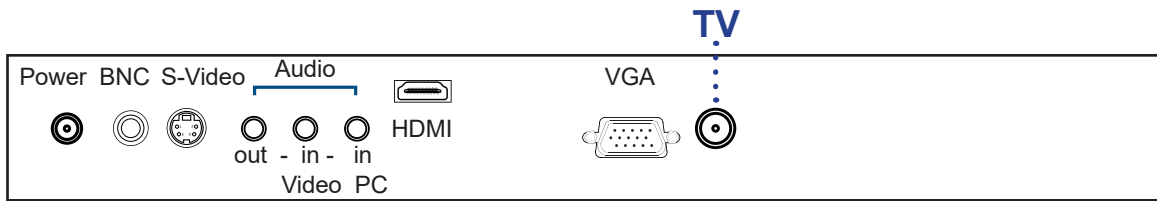**( 1 ) If the unit with LCD,　earthing　may be required**

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

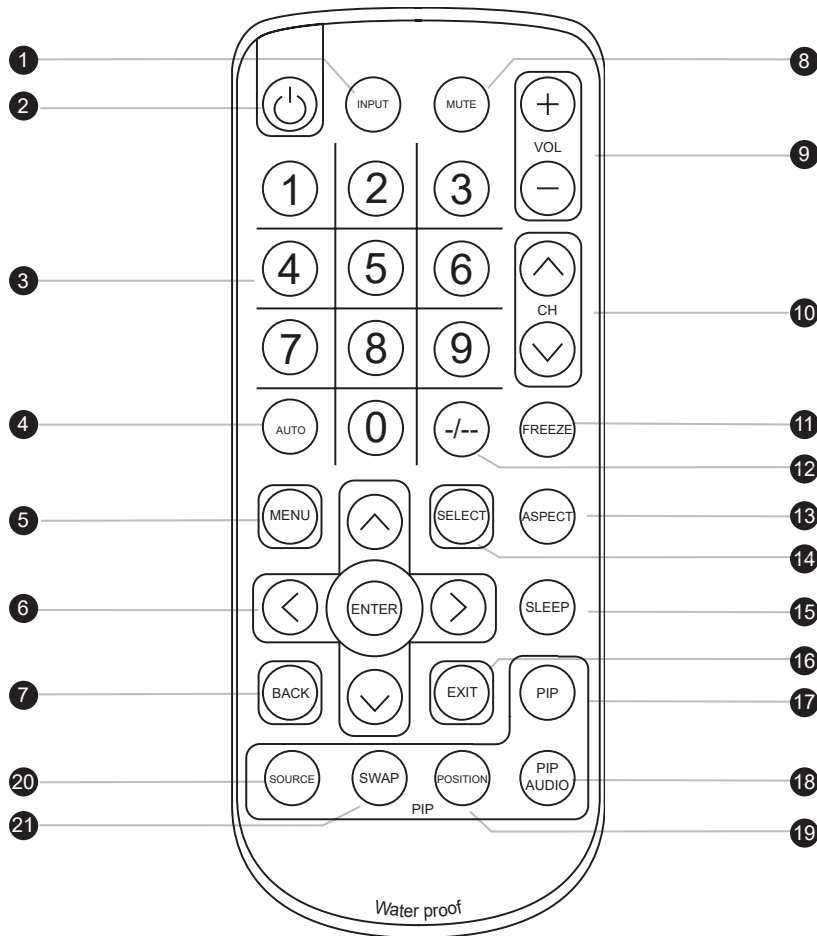| | Input | Part no. | | Standard |
|---|---|---|---|---|
| **Lockable Connector** | DC Power ( Male ) | YM-Ext-461CP001 | | D-type 3W3 |
| | USB | LUSB - A111 - 00 | | - |

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

# < 5.8 > Options : TV ( Analog )

**TV**

| Power | BNC | S-Video | Audio | | | HDMI | VGA | TV |
|-------|-----|---------|-------|---|---|------|-----|-----|

out - in - in

Video PC

***   **For TV option :**

( 1 ) **The AD board comes standard with HDMI, VGA, S-Video, BNC, audio inputs and**
       **RC-2 remote controller.**

( 2 ) **Casing dimensions will be changed.**

| ① | **INPUT** | Select the source |
|---|---|---|
| ② | ⏻ | Switches on or off the TV |
| ③ | **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 |
| ⑥ | **▲ / ▼ / ◄ / ► / ENTER** | Go to the upper menu or select the previous value / Go to the next menu or select the next value / Decrease the setting value / Increase the setting value or enter to the select item setting / Enter to the select item settings or excude the setting |
| ⑦ | **BACK** | Back to previous value |
| ⑧ | **MUTE** | Turn on or off the speaker |
| ⑨ | **Vol + / -** | Increase or decrease the speaker volume |
| ⑩ | **CH + / -** | For TV model only, increase or decrease the channel number |
| ⑪ | **FREEZE** | Reserve for OEM model |
| ⑫ | **- / --** | For setting input single or double digits |
| ⑬ | **ASPECT** | Adjust the screen size |
| ⑭ | **SELECT** | To select the existing item |
| ⑮ | **SLEEP** | Select the sleeping time |
| ⑯ | **EXIT** | Exit the menu or cancel |
| | **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 |

# < 5.9 > Options for Sunlight Readable : Auto Dimming
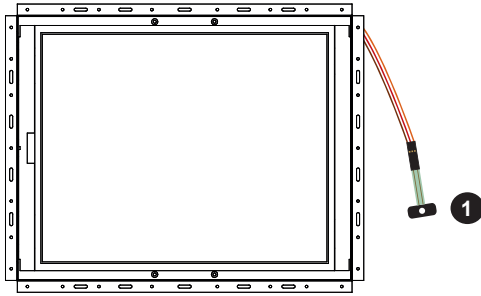


① **DA-01** Light sensor on **OP** model
( 66cm from AD board to sensor end )
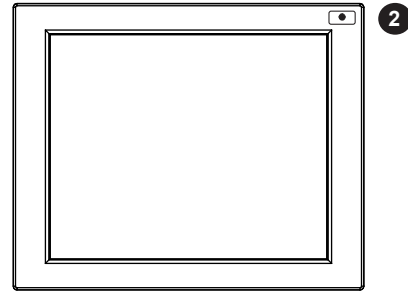
② **DA-01** Light sensor on **AP** model

**DA-01** light sensor installed on the display front panel. Users can set auto dimming ON or OFF from OSD menu. Then display brightness changes according to its ambient brightness. Each change causes 10% increase or decrease on display brightness.

Once the auto dimming is ON, users cannot adjust brightness from OSD menu.

Steps : OSD Menu > Picture > Auto Dimming > ON

## Light Sensor Operation Range
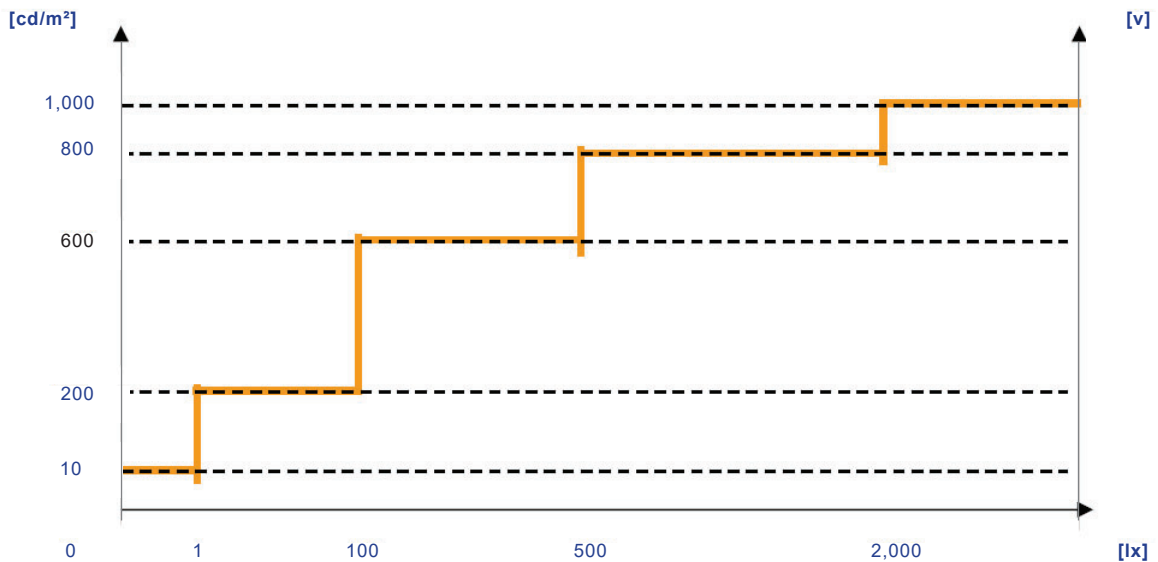


## Options : Switch Dimming

**DS-01** is a IP54 dimming knob installed on the bottom right side of the front panel. The display can support hyper dimming function to adjust brightness from nearly 0% to 100% via the easy-to-use knob. One click on dimming knob causes 2% increase or decrease on display brightness.
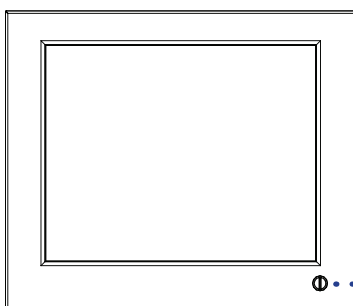


**DS-01 dimming knob**
**Dimensions ( W x H ) : 15.5 x 14.2 mm**

**\*\*\***
**- For this option, front panel and casing dimensions may be changed.**
**- For HAP series, if DS-01 dimming knob applied, IP protection will be downgraded from IP65 to IP54.**

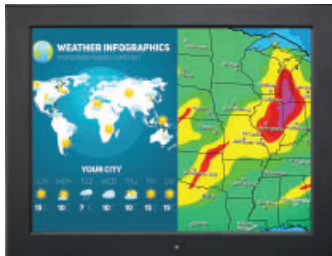# < 6 > Ultraview 17" Family
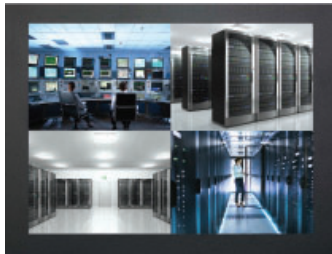
## 250 cd/m² Brightness

6mm aluminum front bezel

**AP-17**

6mm aluminum front bezel
NEMA 4 / IP65  front protection

**NAP-17**

Aluminum front cover

**DP-17**

Universal open frame

**OP-17**

**MP-17**

Industrial Display Kit
- 4:3 17" LED
- LCD controller
- AC power

## 1000 cd/m² Sunlight Readable Brightness

6mm aluminum front bezel

**HAP-17**

6mm aluminum front bezel
NEMA 4 / IP65  front protection

**HNAP-17**

Aluminum front cover

**HDP-17**

Universal open frame

**HOP-17**

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