## User Manual <br> 32" 4K $3840 \times 2160 @ 60 \mathrm{~Hz}$ LCD



AP-K32 / HAP-K32
Aluminum front bezel
'NAP-K32 / HNAP-K32
Front NEMA4 / IP65


DP-K32 / HDP-K32
Aluminum Front Panel


OP-K32 / HOP-K32
Universal Open Frame

Fe $C \in$

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 <br> 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 $40^{\circ}$ Celsius ( $104^{\circ}$ 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:
$\square$ Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
$\square \quad$ Repair or attempted repair by anyone not authorized by us.
$\square$ Any damage of the product due to shipment.
$\square$ Removal or installation of the product.
$\square$ Causes external to the product, such as electric power fluctuation or failure.
$\square$ Use of supplies or parts not meeting our specifications.
$\square$ Normal wear and tear.
$\square$ 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.

## AP-K32 / NAP-K32



32" 4K LCD Display X 1
6ft DP cable X 1
Power cord X 1
Remote controller X 1

Basic I/O

|  | HDMI 2.0 | $\begin{gathered} \mathrm{DP} \\ \hline \end{gathered}$ | Audio ( |  |
| :---: | :---: | :---: | :---: | :---: |

## < 1.2 > Structure Diagram



| Model | Product Dimension <br> $(W \times D \times H)$ | Packing Dimension <br> $(W \times D \times H)$ | Net Weight | Gross <br> Weight |
| :---: | :---: | :---: | :---: | :---: |
| AP-K32 | $780 \times 88.2 \times 474 \mathrm{~mm}$ | $910 \times 195 \times 580 \mathrm{~mm}$ <br> HAP-K32$\quad 30.7 \times 3.5 \times 18.7 \mathrm{inch}$ | $35.8 \times 7.7 \times 22.8 \mathrm{inch}$ | 20.9 kg |
| 46 lb | 25.7 kg |  |  |  |
| 56.5 lb |  |  |  |  |

Front View


Side View


## Rear View



## Bottom View




## DP-K32



32" 4K LCD Display X 1
6ft DP cable X 1
Power cord X 1
Remote controller X 1

Basic I/O

| $\begin{gathered} \text { HDMI } 1.2 \\ \end{gathered}$ | $\begin{aligned} & \text { HDMI } 2.0 \\ & \square \end{aligned}$ | DP | Audi |  |
| :---: | :---: | :---: | :---: | :---: |

## < 2.2 > Structure Diagram



| Model | Product Dimension <br> $(W \times D \times H)$ | Packing Dimension <br> $(W \times D \times H)$ | Net Weight | Gross <br> Weight |
| :---: | :---: | :---: | :---: | :---: |
| DP-K32 | $758 \times 84.2 \times 452 \mathrm{~mm}$ | $910 \times 195 \times 580 \mathrm{~mm}$ | 18.7 kg | 23.5 kg |
|  | $29.8 \times 3.3 \times 17.8 \mathrm{inch}$ | $35.8 \times 7.7 \times 22.8 \mathrm{inch}$ | 41.1 lb | 51.7 lb |

## Front View



Side View


UNIT: mm
$1 \mathrm{~mm}=0.03937$ inch

## Bottom View




- Hardware and M8*4 pcs for VESA mount are not provided

OP-K32


32" 4K LCD Display X 1
6ft DP cable X 1
Power cord X 1
Remote controller X 1

Basic I/O

|  | HDMI 2.0 |  | Audio out $\qquad$ |  |
| :---: | :---: | :---: | :---: | :---: |

## < 3.2 > Structure Diagram



| Model | Product Dimension <br> $(W \times D \times H)$ | Packing Dimension <br> $(W \times D \times H)$ | Net Weight | Gross <br> Weight |
| :---: | :---: | :---: | :---: | :---: |
| OP-K32 | $777 \times 82.2 \times 471 \mathrm{~mm}$ | $910 \times 195 \times 580 \mathrm{~mm}$ | 16.4 kg | 21.2 kg |
|  | $30.6 \times 3.2 \times 18.5 \mathrm{inch}$ | $35.8 \times 7.7 \times 22.8 \mathrm{inch}$ | 36.1 lb | 46.6 lb |

## Front View



## Rear View



Bottom View


Side View


UNIT : mm $1 \mathrm{~mm}=0.03937$ inch

## ( I ) Universal mount


( II ) VESA mount ( $300 * 300 \mathrm{~mm}$ )


| Mechanical Design | AP-K32 | NAP-K32 | DP-K32 | OP-K32 |
| :--- | :---: | :---: | :---: | :---: |
| Protection | 6 mm front bezel | NEMA 4 / IP65 | front cover | open frame |
| Front Panel | Black, RAL 9005 |  |  |  |
| Rear Casing | Black, RAL 9005 |  |  |  |
| VESA mount | $300 \times 300 \mathrm{~mm}$ |  |  |  |
| Universal mount | - | - | ready |  |
| Overhead tilted wall-mount | option | option | - |  |
| Desktop stnad | option | option | - |  |


| LCD Panel |  |
| :--- | :---: |
| Brightness ( cd/m² ) | 300 |
| Contrast Ratio ( typ. ) | $1000: 1$ |
| MTBF ( hrs ) | 30,000 |
| Panel Size ( diagonal ) | 31.5-inch Widescreen TFT color LCD |
| Native resolution | $3840 \times 2160 @ 60 \mathrm{~Hz}$ |
| Colors | 1.07 Billion, 10-bit |
| Viewing Angle ( L/R/U/D ) | $89 / 89 / 89 / 89$ |
| Response Time ( ms ) | 20 |
| Dot pitch ( mm ) | 0.181 |
| Display Area ( mm ) | $698.4 \mathrm{H} \times 392.85 \mathrm{~V}$ |
| Surface treatment | Anti-glare |
| Surface hardness | 3 H |
| Backlight Type | LED |


| Video |  |
| :--- | :--- |
| Digital Display port | DP $1.2 \quad$ / HDCP 1.3 |
| HDMI | HDMI 2.0 / HDCP 2.2 |
|  | HDMI 1.4 / HDCP 1.4 |


| Audio |  |
| :--- | :--- |
| Output <br> Connector | 3.5 mm stereo jack |
| Resistance / Power level | $30 \mathrm{k} \Omega / 2.8 \mathrm{~V}$ |
| Speaker: <br> Dual Stereo | $10 \mathrm{~W} \times 2$ |

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

| Power | Standard |
| :--- | :--- |
| Input | Auto-sensing 100 to 240VAC, 50 / 60Hz |
| Consumption: |  |
| Screen ON | Max. 56W |
| Power saving mode | Max. 9W |
| Power button OFF | Max. 2W |


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

## < 4.1 > Product Specifications

## Environmental Conditions

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


| Physical Specification | AP-K32 | NAP-K32 | DP-K32 | OP-K32 |
| :---: | :---: | :---: | :---: | :---: |
| Product ( W x D x H ) |  |  |  |  |
| mm | $780 \times 88.2 \times 474$ |  | $758 \times 84.2 \times 452$ | $777 \times 82.2 \times 471$ |
| inch | $30.7 \times 3.5 \times 18.7$ |  | $29.8 \times 3.3 \times 17.8$ | $30.6 \times 3.2 \times 18.5$ |
| Packing ( W x x H ) | $910 \times 195 \times 580$ |  |  |  |
| mm |  |  | $910 \times 195 \times 580$ | $910 \times 195 \times 580$ |
| inch | $35.8 \times 7.7 \times 22.8$ |  | $35.8 \times 7.7 \times 22.8$ | $35.8 \times 7.7 \times 22.8$ |
| Net Weight | $20.9 \mathrm{~kg} / 46 \mathrm{lb}$ | $23.9 \mathrm{~kg} / 52.6 \mathrm{lb}$ | 18.7 kg / 41.4 lb | 16.4 k g / 36.1 lb |
| Gross Weight | $25.7 \mathrm{~kg} / 56.5 \mathrm{lb}$ | 28.7 kg / 63.1 lb | $23.5 \mathrm{~kg} / 51.7 \mathrm{lb}$ | 21.2 kg / 46.6 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 |  |  |
| :---: | :---: | :---: |
| Display Port Input | PC Signal | $3840 \times 2160 \times 60 \mathrm{~Hz}$ |
|  |  | \% $2560 \times 1440 \times 60 \mathrm{~Hz}$ |
|  |  | 1920 x $1080 \times 60 \mathrm{~Hz}$ |
|  |  | $\vdots 1920 \times 1200 \times 60 \mathrm{~Hz}$ |
|  |  | 1600 x $1200 \times 60 \mathrm{~Hz}$ |
|  |  | $1280 \times 1024 \times 60 / 75 \mathrm{~Hz}$ |
|  |  | $1024 \times 768 \times 60 / 70 / 75 \mathrm{~Hz}$ |
|  |  | $800 \times 600 \times 60 / 72 / 75 \mathrm{~Hz}$ |
|  |  | $720 \times 400 \times 70 \mathrm{~Hz}$ |
|  |  | $640 \times 480 \times 60 / 72 / 75 \mathrm{~Hz}$ |
|  | Audio Signal | 2ch Linear PCM |
| HDMI Input | HDMI 2.0 / PC signal | Same as Display port |
|  | HDMI 1.4 | $3840 \times 2160 \times 30 \mathrm{~Hz}$ |
|  |  | $2560 \times 1440 \times 60 \mathrm{~Hz}$ |
|  |  | $1920 \times 1080 \times 50 / 60 \mathrm{~Hz}(1080 \mathrm{p})$ |
|  |  | $1920 \times 1080 \times 25 / 30 \mathrm{~Hz}$ ( 1080i ) |
|  |  | $1280 \times 720 \times 50 / 60 \mathrm{~Hz}$ ( 720p ) |
|  |  | 720 x $480 \times 50$ / 60Hz ( 576p / 480p ) |
|  | Audio Signal | 2ch Linear PCM |

O Power light

- Green = On
- Orange = Power saving


## $\cdot \Theta \uparrow \Leftarrow \Leftarrow \rightarrow M \rho$

Membrane Switch Function
Power on / off LCD

## < 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


## (2) Position

Picture size : Adjust the image size

- Full Screen / 4:3 / 5:4 / Pixel to Pixel

DP version: Select the DP version


## (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 |
| :--- |
|  |
| OSD H-Position |
| : Select the language in which the OSD menu is |
| displayed - English |


| OSD V-Position | : Align the screen image left or right |
| :--- | :--- |


| 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 $-90^{\circ} / 180^{\circ} / 270^{\circ}$


## (5) Reset

Reset : Return the adjustment back to factory setting


## (6) PIP

PIP mode

PIP size

PIP position

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


## (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 - $10 \mathrm{~min} / 20 \mathrm{~min} / 30 \mathrm{~min} /$ $50 \mathrm{~min} / 60 \mathrm{~min} / 120 \mathrm{~min} / 240 \mathrm{~min}$


## Options on Reset page

Rotation : Rotate the image in Full screen or $1: 1$ $-90^{\circ} / 180^{\circ} / 270^{\circ}$

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


## < 4.3 > How to Use Picture In Picture ( PIP ) / Picture By Picture ( PBP )

## < 4.3.1 > Picture in Picture ( PIP )

## Mode

Display the Sub screen in the Main screen.
OSD Menu $\rightarrow$ MISC $\rightarrow$ PIP Mode $\rightarrow$ Large / Small / OFF


## Position

Adjust the position of the Sub screen ( top left, bottom left, top right, bottom right ) OSD Menu $\rightarrow$ MISC $\rightarrow$ PIP Position $\rightarrow$ top left / top right / bottom left / bottom right

top left

bottom left

top right

bottom right

## Size

Adjust the size of the Sub screen (Large / Small)
OSD Menu $\rightarrow$ MISC $\rightarrow$ PIP Mode $\rightarrow$ Large / Small
Size of Sub screen

| LCD Monitor | Large Sub screen | Small Sub screen |
| :--- | :--- | :--- |
| $1920 \times 1200$ | $552 \times 414$ | $480 \times 360$ |
| $1920 \times 1080$ | $552 \times 414$ | $480 \times 360$ |
| $1440 \times 900$ | $414 \times 310$ | $360 \times 270$ |
| $1366 \times 768$ | $392 \times 294$ | $340 \times 254$ |
| $1280 \times 1024$ | $368 \times 276$ | $320 \times 240$ |

## < 4.3.2 > Picture By Picture ( PBP )

## Mode

Display the Sub screen next to the Main screen.
OSD Menu $\rightarrow$ MISC $\rightarrow$ PIP Mode $\rightarrow$ PBP


Size

| LCD Monitor | Main / Sub screen |
| :--- | :--- |
| $1920 \times 1200$ | $955 \times 716$ |
| $1920 \times 1080$ | $955 \times 716$ |
| $1440 \times 900$ | $715 \times 536$ |
| $1366 \times 768$ | $678 \times 508$ |
| $1280 \times 1024$ | $635 \times 476$ |

## < 4.3.3 > PIP / PBP Source

To select an input signal for PIP / PBP Sub screen.
OSD Menu $\rightarrow$ MISC $\rightarrow$ PIP Source $\rightarrow$ HDMI / SDI

The PIP / PBP is operable in the following table :

| Main | Sub | HDMI |
| :--- | :---: | :---: |
| HDMI | $x$ | 0 |
| SDI | 0 | $x$ |

## < 4.4 > Remote Controller (RC-2 )



| 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 |


| Options | AP $/$ NAP | DP | OP |
| :--- | :---: | :---: | :---: |
| SDI | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| MCS multi-screen control | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Touchscreen | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| DC Power | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| MIL-type / lockable connector | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Quad display | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Auto / switch dimming |  |  |  |

## < 5.2 > Options: 12G / 4K60 / SD-SDI

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

Designed for use with displays, a SDI input module can support up to $3840 \times 2160 \mathrm{p} @ 60 \mathrm{~Hz}$ resolution without using additional space or power and it comes standard with a 2-year warranty.


## Product Specifications

$|$| INPUT |  |
| :--- | :--- |
| 12G-SDI IN | BNC RG6 / RG59 ( 75 ) ) |


| OUTPUT |  |
| :--- | :--- |
| 12G-SDI OUT | BNC RG6 / RG59 ( 75 ) |


| Compatible Video Format |  |  |
| :---: | :---: | :---: |
| 12G-SDI IN | $3840 \times 2160 \mathrm{p}$ | @60 / 50fps |
| 6G-SDI IN | $3840 \times 2160 \mathrm{p}$ | @30 / 25 / 24fps |
| 3G-SDI IN | $1920 \times 1080 \mathrm{p}$ | @ ${ }^{\text {/ }}$ 50fps |
| HD-SDI IN | $\begin{aligned} & 1920 \times 1080 p \\ & 1920 \times 1080 i \\ & 1280 \times 720 p \\ & \hline \end{aligned}$ | $\begin{aligned} & @ 30 / 25 / 24 \mathrm{fps} \\ & @ 60 / 50 \mathrm{fps} \\ & @ 60 / 50 \mathrm{fps} \\ & \hline \end{aligned}$ |

## Dip Switch Mode

| Output Color |  |  |
| :--- | :---: | :---: |
|  | 4 | 5 |
| YUV444 | OFF | OFF |
| YUV422 | OFF | ON |
| RGB444 | ON | OFF |
| YUV420 | ON | ON |


| EQ | 6 |  |
| :--- | :---: | :---: |


| Out1 Cable length |  |
| :--- | :---: |
| Short | OFF |
| Long | ON |




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.

SDI


| INPUT | $3 \mathrm{G}-$ SDI IN | BNC $\times 1 / 0.8 \mathrm{Vp}-\mathrm{p}(75$ ohm $)$ |
| :--- | :--- | :--- |
|  | $3 \mathrm{G}-$ SDI OUT | BNC $\times 1 /$ Active through, equalized \& relocked |


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


| Compatible Video Format | 3G-SDI | $\begin{aligned} & 1080 p \\ & 1080 p \\ & 1080 i \\ & 720 p \\ & \hline \end{aligned}$ | @60 / 50Hz, 4:2:2 <br> @30 / $25 / 24 \mathrm{~Hz}, 4: 4: 4$ <br> @60 / 50Hz, 4:4:4 <br> @60 / 50Hz, 4:4:4 |
| :---: | :---: | :---: | :---: |
|  | HD-SDI |  | @ $30 / 25 / 24 \mathrm{~Hz}, 4: 2: 2$ <br> @60 / 50Hz, 4:2:2 <br> @60 / 50Hz, 4:2:2 |
|  | SD-SDI | 480i | @60Hz, 4:2:2 |
|  | ITU-R BT. 656 | 576 i |  |


| Compatible Audio Format | 3G-SDI | $48 \mathrm{kHz}, 16$ / 20 / 24 bit, 2 CH, Synchronized Video |
| :--- | :--- | :--- |
|  | HD-SDI | $48 \mathrm{kHz}, 16$ / 20 / 24 bit, 2 CH, Synchronized Video |
|  | SD-SDI | $48 \mathrm{kHz}, 16 / 20 / 24 \mathrm{bit}, 2 \mathrm{CH}$, Synchronized / Asyn- <br> chronized Video |


| Max. Transmission Distance <br> 75 ohm coaxial cable | $3 \mathrm{G}-\mathrm{SDI}$ | 150 m at $2.97 \mathrm{~Gb} / \mathrm{s}$ |
| :--- | :--- | :--- |
|  | $\mathrm{HD}-\mathrm{SDI}$ | 250 m at $1.485 \mathrm{~Gb} / \mathrm{s}$ |
|  | SD-SDI | 480 m at $270 \mathrm{Mb} / \mathrm{s}$ |

## < 5.4 > 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


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


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

K32" USB Touchscreen Specification

| Model | TPC-10 Multi-touch | IR-10 Infrared |
| :---: | :---: | :---: |
| Technology | Projected Capacitive | Infrared |
| Touch Point | 10 | 10 |
| Input Type | Finger or Capacitive Stylus | Pen, Finger, Finger of gloved hand activation |
| Resolution | $4096 \times 4096$ | - |
| Touch Point Accuracy | $\pm 2 \mathrm{~mm}$ | $\pm 2 \mathrm{~mm}$ |
| Response Speed | $<5 \mathrm{~ms}$ | $\leq 15 \mathrm{~ms}$ |
| Activation Force | $<5 \mathrm{~g}$ | No minimum touch activation force |
| Surface Hardness | 6 H | - |
| Light Transmission | > 85\% | - |
| Haze | 3\% $\downarrow$ | - |
| Durability | 50 million touches | Unlimited |
| Top Layer | 3 mm Glass |  |
| Bottom Layer | 0.7 mm Sensor Glass | lass |
| Thickness | $3.9 \pm 0.1 \mathrm{~mm}$ | 3 mm |
| Connector | USB | USB Type A |
| Compatibility | Linux / Android / Windows / Mac | Windows 7 / Windows 10 |

- Dimension will be changed if touchscreen required
- USB touchscreen package includes $1 \times 6 \mathrm{ft}$ 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



## IR-10 / 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.


| Model | 24V | $\mathbf{4 8 V}$ | 125V |
| :--- | :---: | :---: | :---: |
| Input rating |  |  |  |
| Input voltage: | 24 -Volt | 48 -Volt | $110-$ Volt |
| Input range: | $18 \sim 36 \mathrm{~V}$ | $36 \sim 75 \mathrm{~V}$ | $66 \sim 160 \mathrm{~V}$ |
| Input current | 50 mA | 50 mA | 40 mA |
| - No load | 4880 mA | 2442 mA | 993 mA |
| - Full load |  |  |  |
| Output rating | $24-$ Volt | $24-$ Volt | $24-$ Volt |
| Output voltage: | 4.16 A | 4.16 A | 4.16 A |
| Output current: | $88 \%$ | $90 \%$ | $92 \%$ |
| Efficiency |  |  |  |

## *** For DC power option :

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

|  | Input |  |  | MIL Standard |
| :---: | :---: | :---: | :---: | :---: |
| MIL - type Connector | $\begin{aligned} & \text { DC Power *** } \\ & \text { (Male ) } \end{aligned}$ | MS3470W8-33P |  | MIL - DTL - 26482 |
|  | VGA *** <br> ( 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 <br> Connector <br> ( Male ) | YM-Ext-461CP001 | D-type 3W3 |  |
|  |  |  |  |

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

## < 5.8 > Options: Quad Display



QD Specification

| Item |  | Description |  |
| :---: | :---: | :---: | :---: |
| Model Number |  | QD (NTSC) | QD (PAL) |
| Number of Color |  | 16.7 M | 16.7 M |
| Imaging System |  | NTSC | PAL |
| Resolution |  | $1024 \times 525$ | $1024 \times 625$ |
| Refresh Rate |  | 60 | 50 |
| Video Input | Camera Input | $1.0 \mathrm{Vpp}, 75 \mathrm{Ohm} \times 4$ |  |
|  | VCR Input | $1.0 \mathrm{Vpp}, 75 \mathrm{Ohm} \times 1$ |  |
| Video Output | Live Monitor | $1.0 \mathrm{Vpp}, 75 \mathrm{Ohm} \times 1$ |  |
|  | Loop Through Out | $1.0 \mathrm{Vpp}, 75 \mathrm{Ohm} \times 4$ |  |
|  | VCR Output | $1.0 \mathrm{Vpp}, 75 \mathrm{Ohm} \times 1$ |  |
| Auto Gain Control |  | Yes |  |
| Time / Date |  | Yes |  |
| On Screen Display |  | Yes |  |
| Camera Title |  | 8 Character Title |  |
| Display Format | $\begin{array}{\|l\|} \hline 2 \times \text { Zoom On } \\ \text { Playback } \\ \hline \end{array}$ | Yes |  |
|  | QUAD | Yes |  |
|  | FULL | Yes |  |
|  | SEQUENCY | Yes |  |
| Dwell Time |  | 0 to 99 Sec Adjustable |  |
| Alarm Inputs |  | Selectable NO/NC Contacts $\times 4$ |  |
| Relay Outputs |  | NO/NC contacts x 1: 1A@DC24V Max. |  |
| Alarm Hold Time |  | 1 Sec to Non-stop |  |
| Built-in Buzzer |  | Yes |  |
| Key Lock |  | Yes |  |

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