Avenview
Control Your Video

VIDEO WALLS VIDEO PROCESSORS
VIDEO MATRIX SWITCHES
EXTENDERS **SPLITTERS** WIRELESS
CABLES & ACCESSORIES

4x1 HDMI 2.0 Quad Multiviewer with 4K@60 UHD Scaler on Output

Model #: HDM2-SPLITPRO-T4K

TABLE OF CONTENTS

SECTION 1: GETTING STARTED

1.1 IMPORTANT SAFEGUARDS

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

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.
- u se 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.

1.2 SAFETY INSTRUCTIONS

The HDM2-SPLITPRO-T4K 4x1 Quad multiviewer with 4K UHD support on the output and audio has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the HDM2-SPLITPRO-T4K should be used with care. Read the following safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- ⚠ Do not dismantle the housing or modify the module.
- ⚠ Dismantling the housing or modifying the module may result in electrical shock or burn.
- ⚠ Refer all servicing to qualified service personnel.
- ⚠ Do not attempt to service this product yourself as opening or removing housing may expose you to dangerous voltage or other hazards
- ⚠ Keep the module away from liquids.
- ⚠ Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.
- ⚠ Have the module checked by a qualified service engineer before using it again.
- ⚠ Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.

This equipment has been tested and found to comply with 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.

Warning symbols	Description
	ONLY USE THE PROVIDED POWER CABLE OR POWER ADAPTER SUPPLIED. DO NOT TAMPER WITH THE ELECTRICAL PARTS. THIS MAY RESULT IN ELECTRICAL SHOCK OR BURN.
	DO NOT TAMPER WITH THE UNIT. DOING SO WILL VOID THE WARRANTY AND CONTINUED USE OF THE PRODUCT.
BEWARE this unit contains static sensitive devices	THE VIDEO BOARDS ARE VERY SENSITIVE TO STATIC. PLEASE ENSURE IF RACK MOUNTED OR INSTALLED ON A SURFACE, IT SHOULD BE IN A GROUNDED ENVIROMENT.

WARNING

Read & understand user guide before using this device.

Failure to follow the proper installation instructions could result in damage to the product and preventing expected results.

2. INTRODUCTION

This 4 x1 multiviewer Scaler was developed for the purpose of supporting higher output resolution **(4K@60)** for multiple sources on a single screen.

This HDMI device can accept 4 HDMI input digital sources and combine (4) four video signals onto a single HDMI UHD or HD monitor The user can easily manage each input via the supplied Control Software and create any layout and position of any of the 4 (four) Inputs on a single monitor. This device supports full range of input video resolutions up to WUXGA@60 (RB) or full HD1080p and audio RCA breakout supported for external audio distribution systems. Audio channels can be selected to playback with input or can be muted.

Fast Switching – This device can input any 4 HDMI input digital sources and then combine, (4) four video signals onto a single HDMI HD monitor. The user will benefit with from its processing power to switch between the 8 user defined function via IR Remote, Ethernet or RS232.

Crop – This device can Crop any 4 HDMI input digital sources to remove black bars and then combine, (4) four video signals onto a single HDMI HD monitor. This device can be configured using the supplied Control software via Ethernet or RS232 to set the desired layout on the connected screens.

PIP,PAP, Overlay – This device can input any 4 HDMI digital sources and then combine, (4) four video signals onto a single HDMI HD monitor, which the user can select picture In picture (PIP) , picture Aside picture (PAP) or overlay with the supplied Control Software via Ethernet or RS232 to set the desired layout configuration.

Window Scale and Position – The user can easily change the individual channel size and choose different position and layout on the single monitor with the Control Software via Ethernet or RS232 to set the desired layout configuration.

Scalable Rotation (90˚ & -90˚) – The user can easily Rotate/Scale only a single input/window image 90˚ left and right. This device can be configured with the Control Software, IR Remote, Ethernet, RS232 or front panel buttons .

- Fast switching between input channels and combined multiple images on single HD monitor;
- Crop the (4) four HDMI Input Channels;
- Supports PIP, PAP and multi-windows layout configurations;
- Single Input Rotation (90° left & right) functions;
- 8 preset Hot keys with 4 Custom layouts and 4 Full screen layouts within the supplied control software;
- 8 Custom saved layout buttons via the IR Remote;
- Input resolution support full range of video resolutions up to WUXGA@60 (RB) or full HD1080p;
- Output resolution support Full HD or upscale to 4K@60 (3840x2160);
- Audio dembedded via RCA Left and Right audio connectors
- RS 232 port for Service mode and firmware upgrade;
- Supports RS 232,Ethernet, IR Remote and front panel buttons;
- Factory Reset feature.

2.2 PACKAGE CONTENTS

Before you start the installation of the converter, please check the package contents.

I	HDM2-SPLITPRO-T4K	X I	
2	POWER SUPPLY (12V 5A)	X I	
3	IR REMOTE	X I	
4	SOFTWARE	X I	
5	RACKMOUNT BRACKET	X 2	
6	USER MANUAL	X I	

2.3 BEFORE INSTALLATION

- Put the product in an even and stable location. If the product falls down or drops, it may cause an injury or malfunction. Don't place the product in too high temperature (over 50°C), too low temperature (under 0°C) or high humidity.
- Use the DC power adapter with correct specifications. If inappropriate power supply is used then it may cause a fire.
- Do not twist or pull by force ends of the video cable. It can cause malfunction.

HDM2-SPLITPRO-T4K

LAYOUT 1

CABLE INDEX
- Output
- Input / Source
- RS-232

MONITOR
Preset layout 1

Preset Layout 1
Preset Layout 2
Preset Layout 3
Preset Layout 4

Full Screen Layout 1
Full Screen Layout 2
Full Screen Layout 3
Full Screen Layout 4

HDMI SOURCE 1
HDMI SOURCE 2
HDMI SOURCE 3
HDMI SOURCE 4

AUDIO OUT
RS-232 CONTROL
IP CONTROL
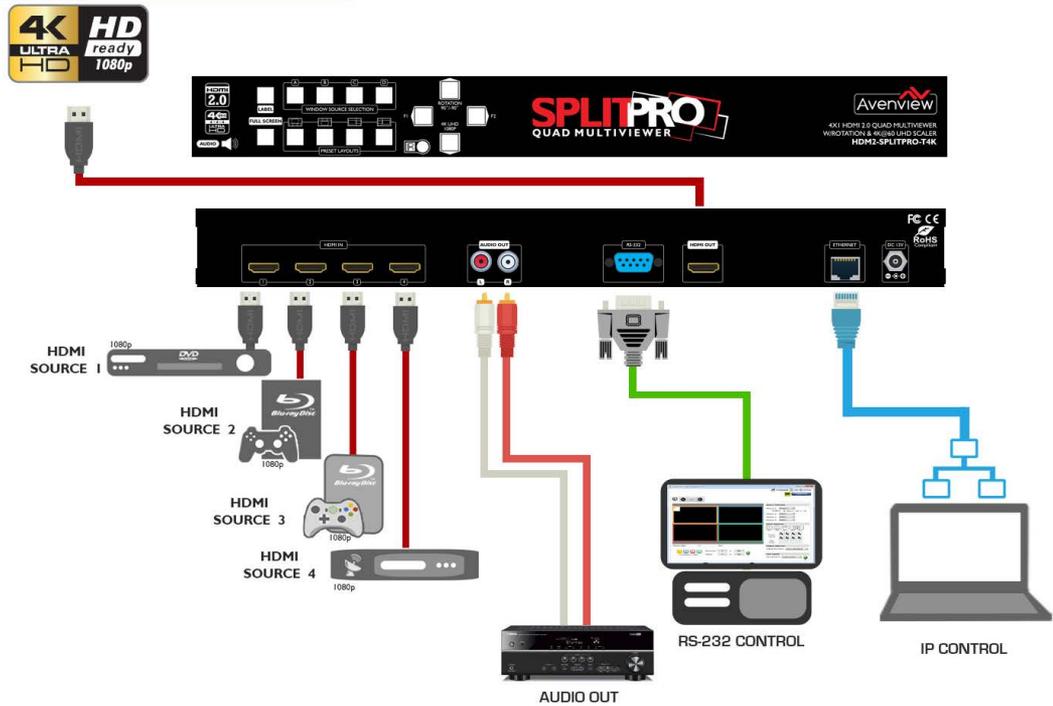
3. PANEL DESCRIPTION

3.1 INPUT PANEL (HDM2-SPLITPRO-T4K) Front

1. **Full Screen Button**		2. **Preset Layouts:** PAP1/2/3/4	
3. **IR Sensor:** Receive IR commands from IR remote		4. **Resolution Button:** 4K UHD/1080p	
5. **Reserved Buttons:** F1 & F2		6. **Rotation Button:** +90 & -90	
7. **Window Source Selection:** Source A/B/C/D		8. **Window Label Button:** Label ON/OFF	

3.2 INPUT PANEL (HDM2-SPLITPRO-T4K) Rear
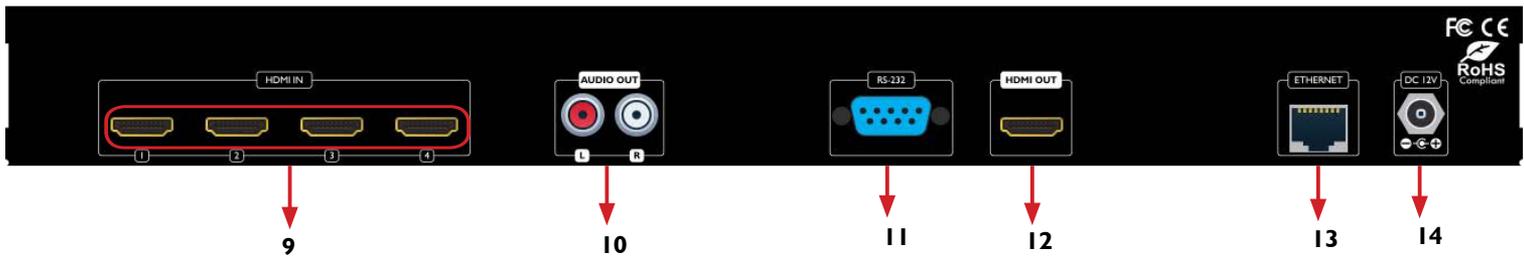

9. **HDMI IN 1-4:** Connect up to 4 HDmI devices to the INpu T ports 1-4(Blu-ray /Set-Top Box or PC)	10. **Stereo Audio L/R:** Connect red white audio RCA jacks to extract audio to an external audio source.
11. **RS-232:** D-Sub 9pin port for sending and controlling the unit by PC/Notebook via RS232 cable.	12. **HDMI OUT:** Connect a single HDmI HD monitor/ Display to view the four inputs connected.
13. **Ethernet:** RJ45 jack for sending and controlling the unit by pC/Notebook via ethernet cable.	14. **DC 12V:** plug the 12V DC power supply into the unit supplied to an AC 110v outlet.

* Some display/monitor brands the window border may have interference, adjusting the display's motion setting may resolve the interference issue.

4. IR REMOTE CONTROL

1. **F1:** To Unlock and Lock front panel buttons

2. **F2 RESERVED:** N/A

3. **F3 RESERVED:** N/A

4. **POWER:** To power ON or OFF the unit

5. **ROTATION:** Rotate Window A only +90 or -90.

6. **LABEL:** To toggle window label ON/OFF

7. **SOUND:** Easily switch between input audio source.

8. **BACKGROUND:** To enable and setup background picture.

9. **4K2K:** Enable 4k@60 UHD resolution on the output.

10. **1080p:** Enable 1080p@60 resolution on the output.

11. **720p:** Enable 720p@60 resolution on the output.

12. **MUTE:** To mute the audio on output

13. **CUSTOM LAYOUT 1-8:** Enables the configured user defined layout1-8

14. **QUAD LAYOUT 1:** Enables the predefined layout 1

15. **QUAD LAYOUT 2**: Enables the predefined layout 2

16. **QUAD LAYOUT 3**: Enables the predefined layout 3

17. **QUAD LAYOUT 4**: Enables the predefined layout 4

18. **FULL SCREEN LAYOUT 1-4**: Enables the source input to full screen window mode A-D

* Audio function only work under A to D.
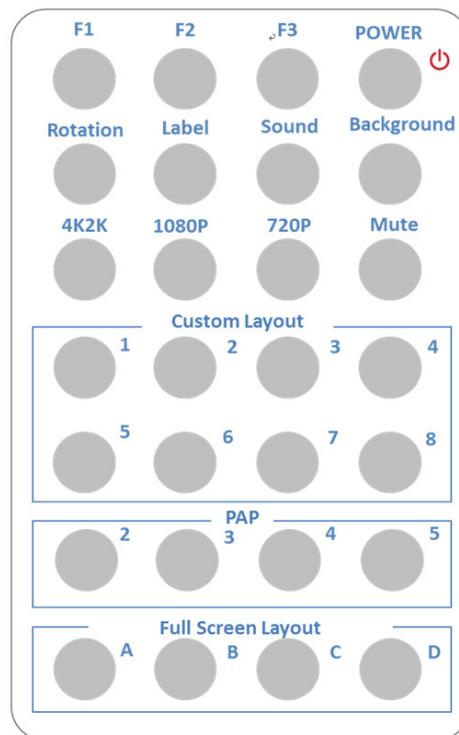
HARDWARE SETUP

To setup Avenview HDM2-SPLITPRO-T4K follow these steps below:

1. Mount or fix the HDM2-SPLITPRO-T4K on a secure shelf, AV rack or steady surface;
2. Ensure the power is off on the HDM2-SPLITPRO-T4K, all source devices and displays that will be connected;
3. Connect your (4) four HDMI cables to the (4) four HDMI sources such as (Blu-ray player, Laptop or Set-Top-Box or Gaming device);
4. Connect your HDMI cables to the single HD Displays, LCD or PC monitors that is receiving the video signals.
5. Power on all devices.
6. Connect your computer to HDM2-SPLITPRO-T4K via RS232, RS-232 to USB or Ethernet cable in order to control via Telnet or RS232.

SERIAL PORT SETTING

RS-232 Wiring (Cross Cable Connection)

Remote Controller(PC)		HDM-SPLITPRO-4K	
PIN	Assignment	PIN	Definition
1	NC	1	NC
2	TxD	2	RxD
3	RxD	3	TxD
4	NC	4	NC
5	GND	5	GND
6	NC	6	NC
7	NC	7	NC
8	NC	8	NC
9	NC	9	NC

RS-232 Connector Pinout
DTE (PC Side)
DE-9 Male Connector

CD RxD TxD DTR GND
1 2 3 4 5
6 7 8 9
DSR RTS CTS RI

RS-232 Connector Pinout
DCE (Device Side)
DE-9 Female Connector

GND DTR RxD TXD CD
5 4 3 2 1
9 8 7 6
RI RTS CTS DSR
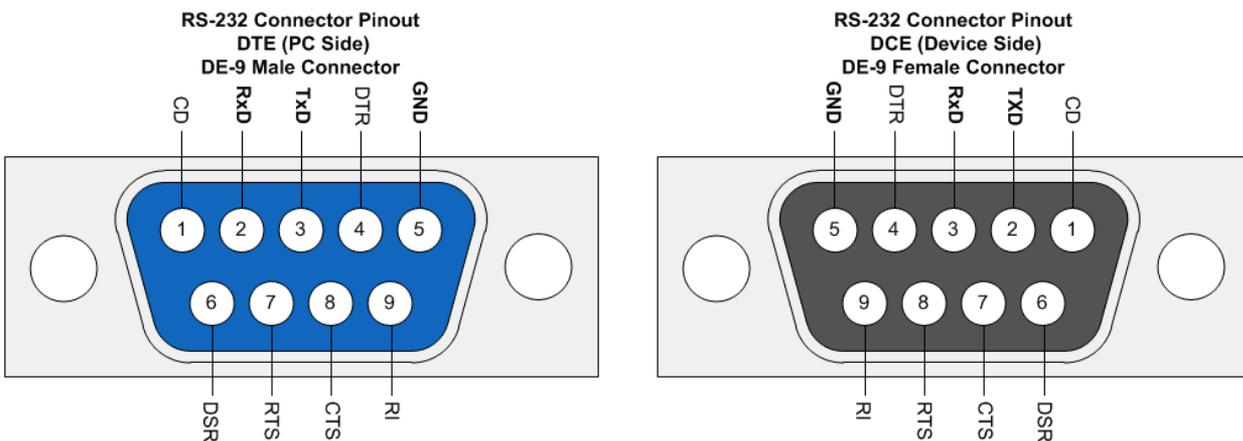
RS-232 SETTINGS	Baud Rate: 115200bps Data Bit: 8 bits parity: None flow Control: None Stop Bit: 1

Control through RS-232 port / Ethernet port

1. Please note when power cycling device, please restart unit at least 5 to 15 seconds after to allow the power capacitors to discharge.

2. The HDM2-SPLITPRO-T4K PC control software operates with Microsoft Windows 98, 2000, XP, 7, 8 through the interface of Ethernet or RS-232 serial control.

3. Through software and COM port you can assign an IP address before connecting via RJ45.

Please NOTE: (Under Microsoft Windows 7, please run software as administrator).

Once the software is installed click on the ICON, the following dialog will pop-up. First time connection, please connect via RS232 serial cable.

RS-232 serial Mode: Use RS-232 to connect the port on device and computer. Select the correct COM port and click the OK button.

Ethernet Mode: Enter the IP address of the device and click the OK button.
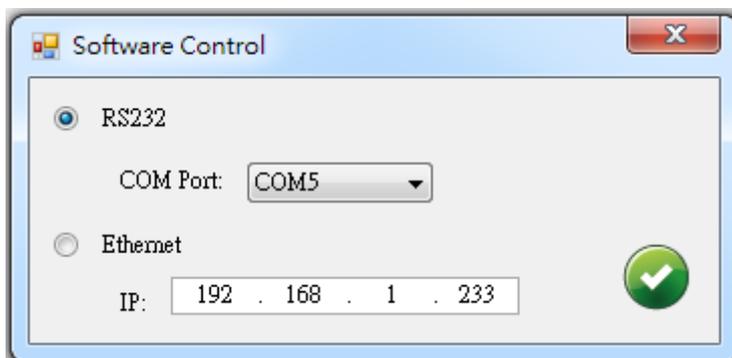
After the software control setting is complete and correct, it will enter directly to control interface.
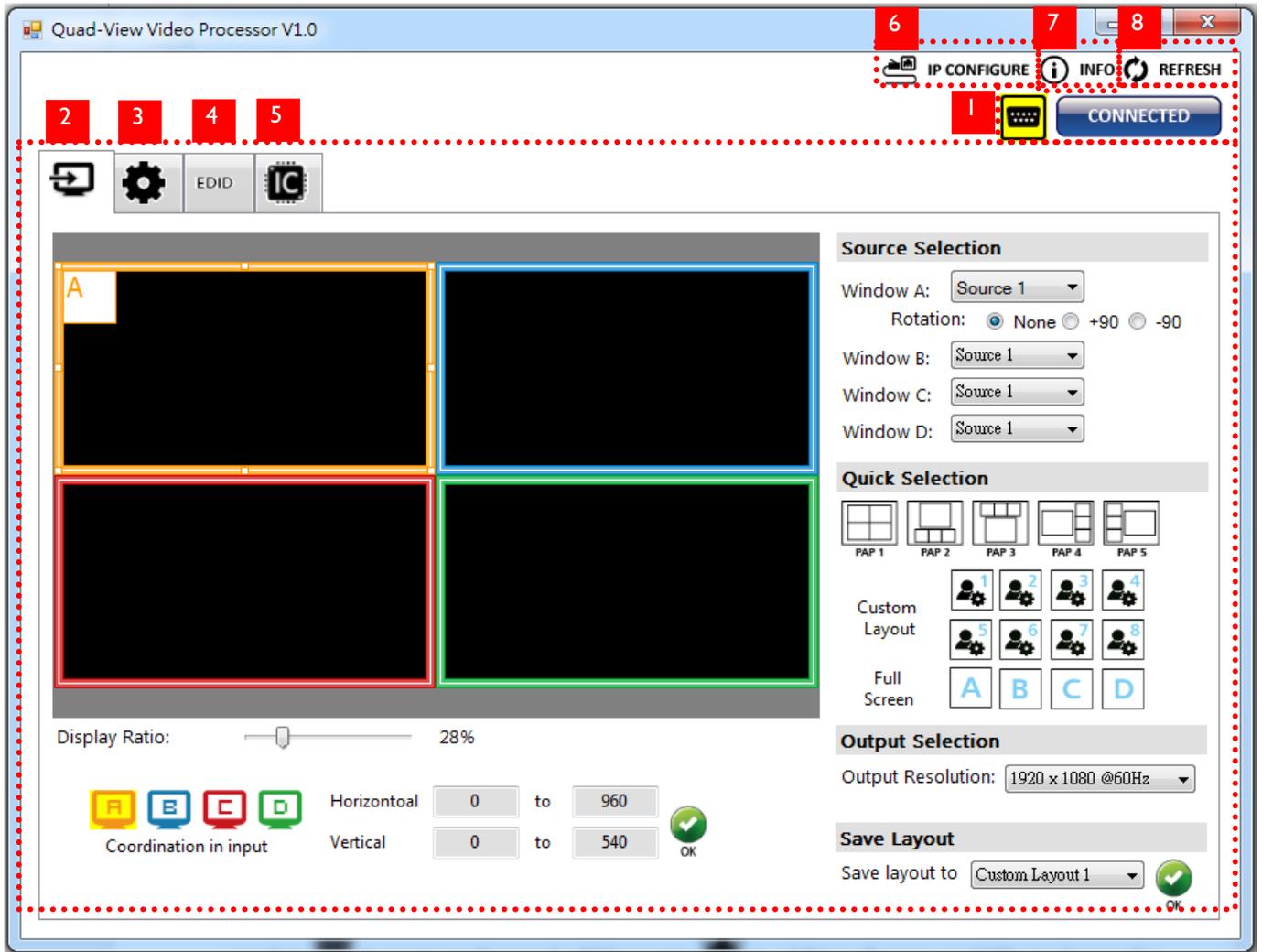
1. **Connection Status:**

   This shows the active connection status. If connected by RS-232 serial Mode device, the icon is [⌨] . If connected by ethernet [🖧] . Easily change the control method, by clicking on the [⌨] button.

2. **Output Settings**

   Users can set up the designated inputs, to each window A~D or duplicate, output resolution, PAP predefined layout setting or single input rotation.

   (1) Source Selection

      For each display window, you can assign the video souras the caption below:
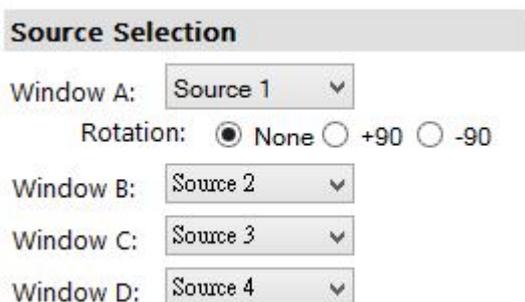
(2) Quick Selection Tabs

Provided in the software 9 default modes (5 PAP and 4 Full Screen) and 8 custom modes for you to create.
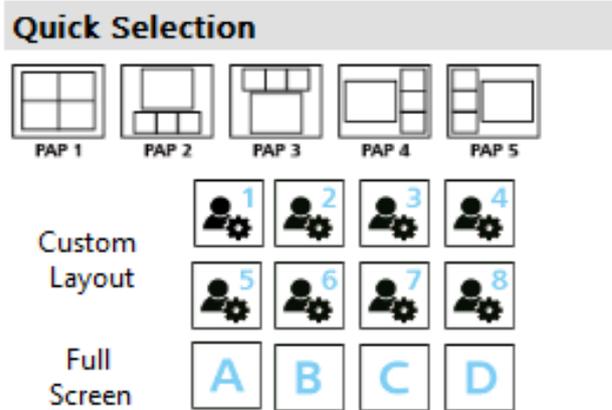
(3) Output Resolution

Set the output resolution from 640x480-4K@60 to match the connected Monitor Timings
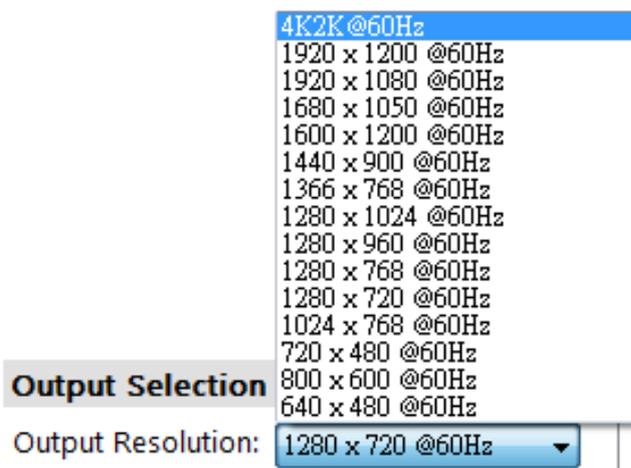
(4) Save Layout

Also the user can define their own 8 custom layouts and save the frequently used scenarios into the flash memory.
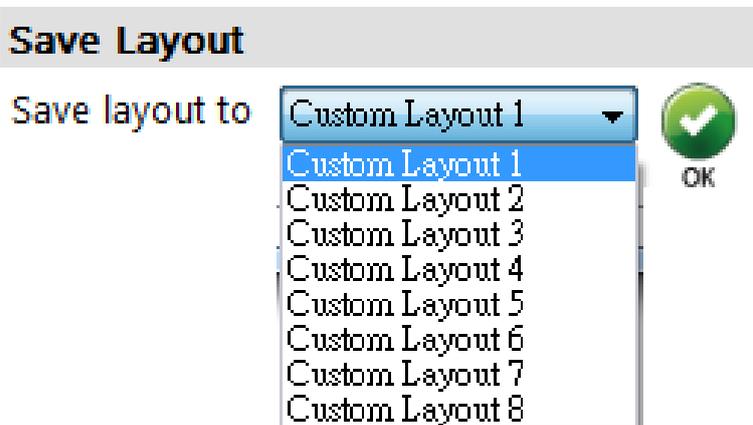
(5) Display Panel

As illustrated below, users can resize any window by simply dragging the highlighted box with the mouse and immediately see the results on the attached monitor. The different colors of the frames represent the different inputs for easy identification. The Horizontal and Vertical coordinate shows the position of input source on the screen. In addition, the display ratio can be adjusted to view the layout in software (Zoom in Zoom out) .

Display Ratio: 28%

Coordination in input

| Horizontoal | 0 | to | 960 |
| Vertical | 0 | to | 540 |

OK
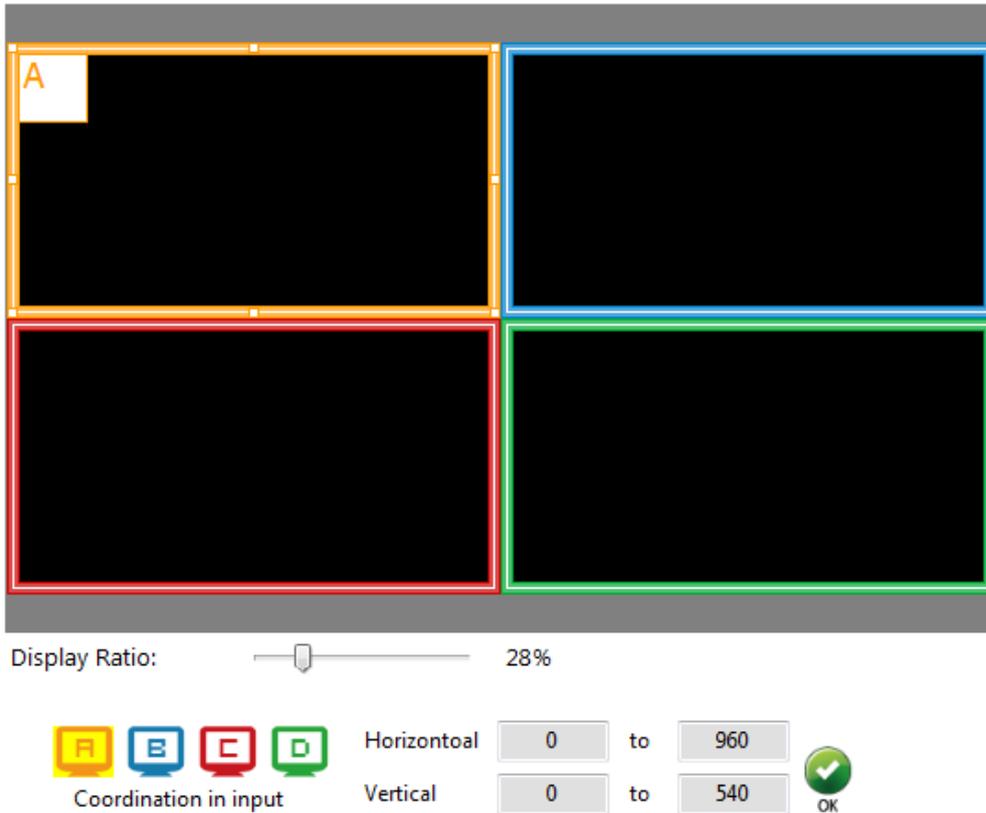
3. **Advanced Setting**
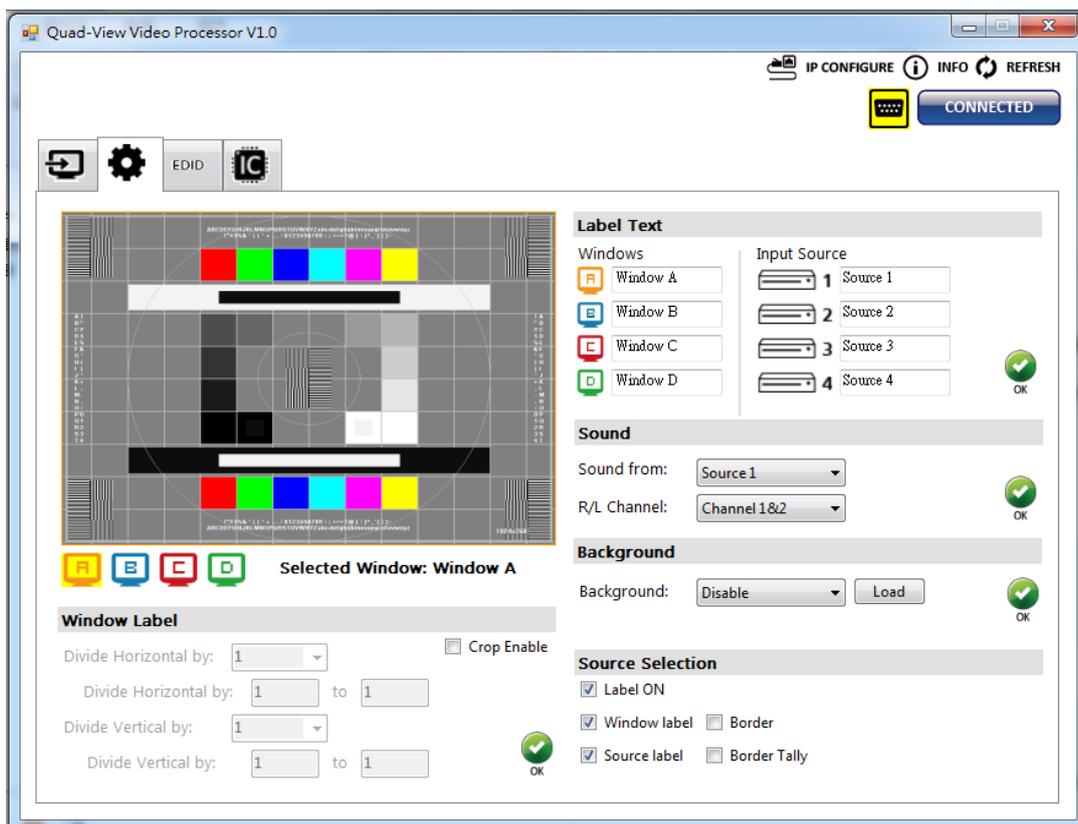
(1) Window settings

Users can adjust each display area and input source as desired. To proceed with this function user have to click on the specific channel A, B, C, or D, as indicated by the icons 🅰 🅱 🅲 🅳 in the control panel as shown above. After the specific channel is chosen, users can click on the "CROP ENABLE" box, then crop the display area of that and other channels. The control panel of the software illustrates by preview on how those settings would to be presented at the output. Using "DIVIDE- Horizontal/Vertical"

(2) Label Text

In here, users can easily rename /label the input to be shown on the window with the video to identify the input.

Label Text

Windows	Input Source
🅰 Window A	1 Source 1
🅱 Window B	2 Source 2
🅲 Window C	3 Source 3
🅳 Window D	4 Source 4

OK
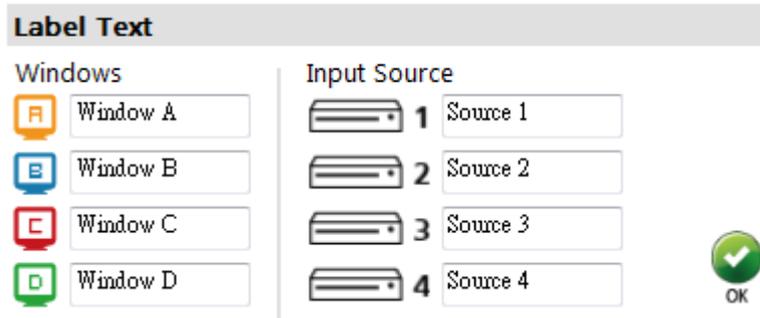
(3) Sound

To set and match which audio source to the output video through the R/L channels.

Sound

Sound from: Source 1

R/L Channel: Channel 1&2

OK

(4) Background

To set up the background of each window. The CS has 4 default pictures for the user to select. To change the default picture,please click the Load button to select the picture that would be used.

Background

Background: Picture 1   Load

Picture 1
Picture 2
Picture 3
Picture 4
Disable

OK
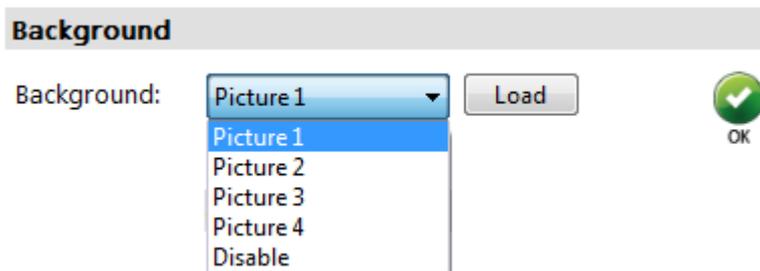
(5) Window Label

Users can simply determine if the window's label/border can be shown or invisble.

Source Selection

☑ Label ON

☑ Window label   ☑ Border

☑ Source label   ☐ Border Tally
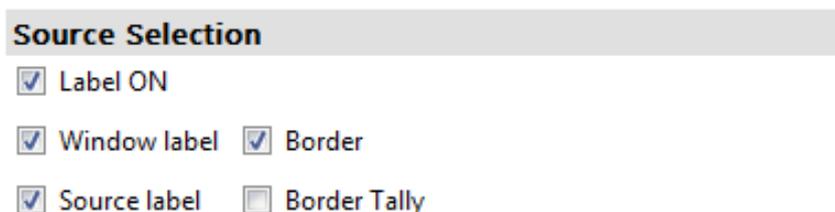
4. EDID (Extended Display Identification Data)
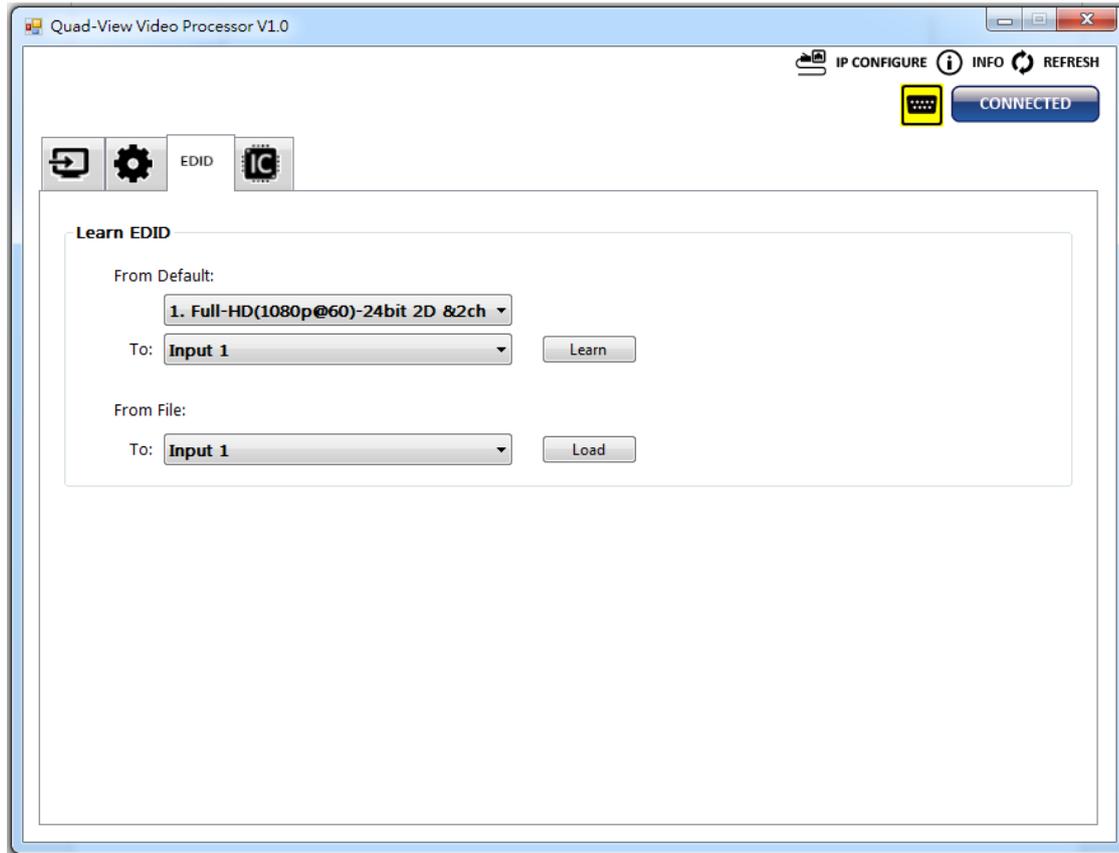
(1) Learn EDID from Default

➢ Select Default EDID
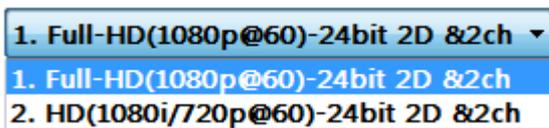
➢ Select Input
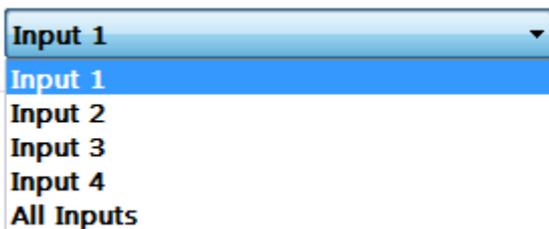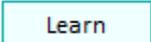
➢ Click [Learn] button to learn default EDID.

(2) Learn EDID from File

➢ Select input
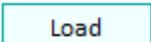
➢ Click [Load] button to select the EDID file and write it into input

5. System Setting
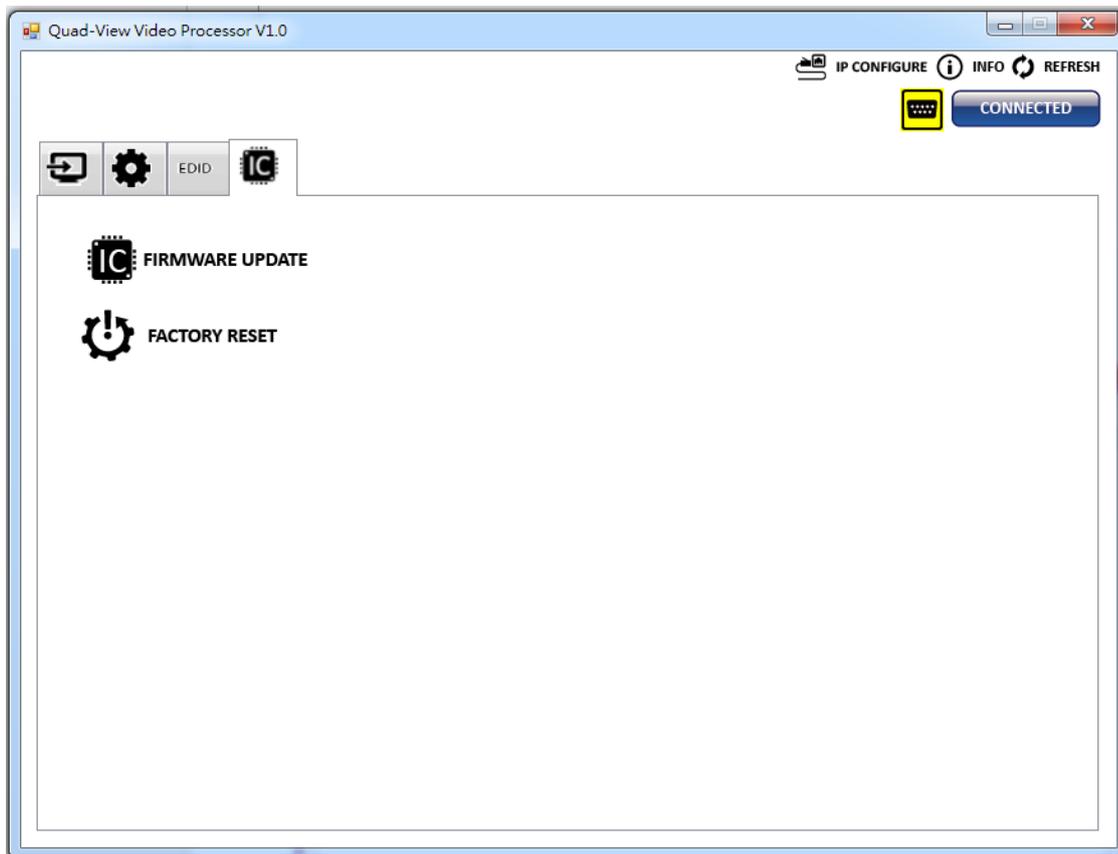
(1) Firmware Update

➢ Click button to perform authorized firmware update.

➢ The "Firmware update" window pops up as below.

➢ Please select the correct COM port or click "Scan" button to connect device.

➢ Click "update" button to do firmware update.
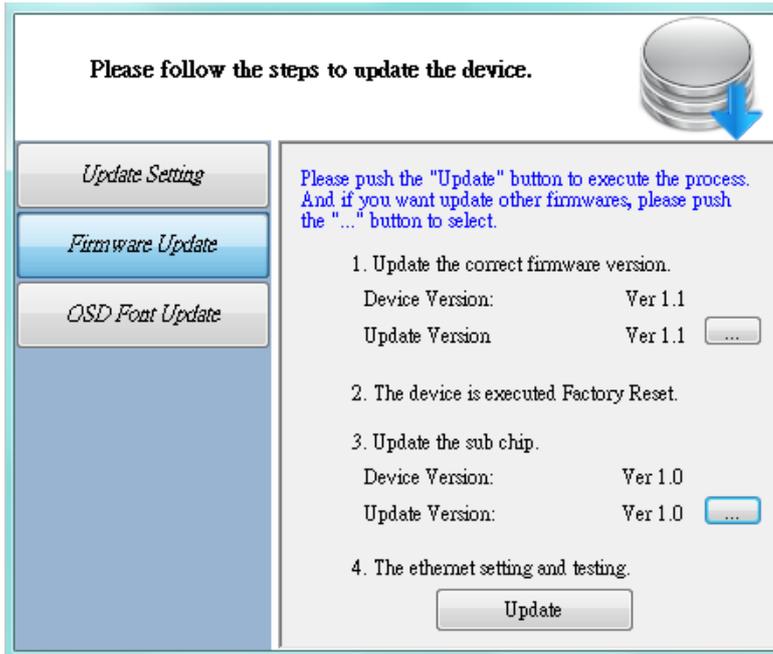
➢ To change the OSD (window label) font, please click "OSD Font Update" window and click "update" to change OSD font.

(2) Factory Reset

➢ Click [FACTORY RESET icon] **FACTORY RESET** button to performa factory default reset.

➢ The process will take approx. 25 seconds.
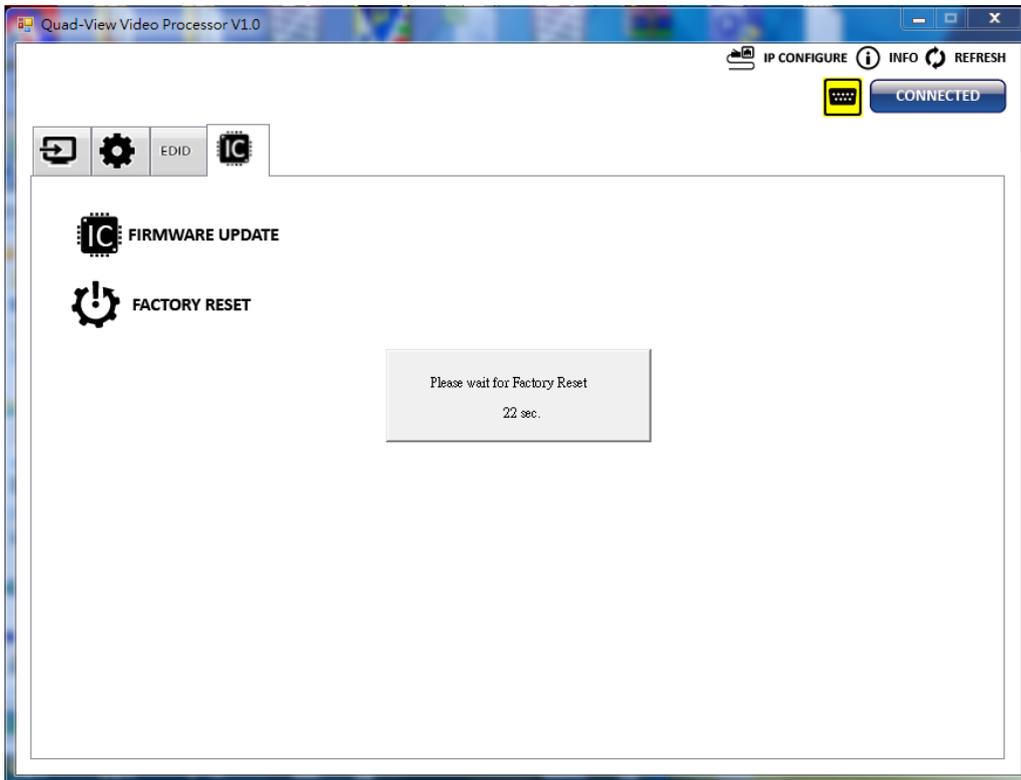
6. IP Configure

To use Ethernet control users should click on the [IP CONFIGURE] button to set the network IP range. Please see the caption below. After the information has been complete, please click the [Apply] button.
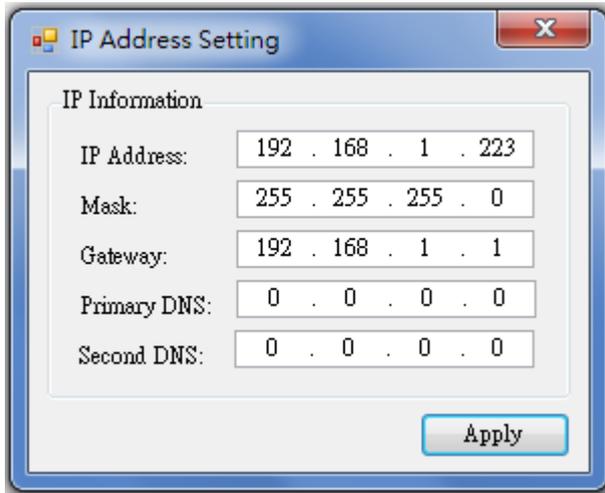
7. Info

Displays the Software and firmware version.

Software/firmware information is subject to change without prior notice

8. Refresh

This function will gather the changes made wihin software and hardware. Then update the software interface state with its current info.

5. SPECIFICATIONS

Item	Description
UNITS	HDM2-SPLITPRO-T4K
UNIT DESCRIPTION	4x1 HDMI 2.0 Quad multiviewer with Rotation, 4K@60 support on output
HDCP COMPLIANCE	Yes 2.2
VIDEO BANDWIDTH	Input: HDMI [2.25G to 6.75Gbps] / Output: Single-link 600MHz [18Gbps]
HDMI COMPLIANCE	Input: HDMI 1.4 /Output: HDMI 2.0a
VIDEO FORMAT SUPPORT	HDMI 2.0
INPUT SUPPORTED RESOLUTIONS	PC -VGA 640x480, XGA (1024 x 768), SXGA (1280 x 1024), UXGA (1600 x 1200), WUXGA (1920 x 1200) 480i/720p/1080i/1080p@60 and up to 1920x1200@60
OUTPUT SUPPORTED RESOLUTIONS	720p 50Hz, 720p 60Hz, 1080p 24Hz, 1080p 25Hz, 1080p 30Hz, 1080p 50Hz, 1080p 60Hz, 1920X1200RB Hz, 3840x2160 60 Hz and 4K2K@60 (4:4:4 8bits)
AUDIO SUPPORT	Bypass LPCM 2CH, 6CH, 8CH/AC3/DTS/Dolby Digital Plus/ Dolby TruHD/DTS-HD
INPUT	4x HDMI + 1xRS-232 + 1x RJ-45(Ethernet)
OUTPUT	1 x HDMI
CONTROL	RS 232 / IP Control
RJ45 CONNECTOR	WE/SS 8P8C with 2 LED indicators
ESD PROTECTION	Human body model — ±15kV [air-gap discharge] & ±8kV [contact discharge]
WEIGHT	3.3 lbs
DIMENSIONS (L X W X H)	12.5" x 6.8" x 1.7"
POWER SUPPLY	12V/5A DC (US/EU standards, CE/FCC/UL certified)
POWER CONSUMPTION	8.9W

Environmental

Item	Description
OPERATING TEMPERATURE	32° ~ 104°F (0° to 40°C)
STORAGE TEMPERATURE	-4° ~ 140°F (-20° ~ 60°C)
RELATIVE HUMIDITY	20~90% RH (no condensation)

Avenview Warranty Certificate

AVENVIEW CORP. ("Avenview") warrants Avenview-branded product(s) contained in the original packaging against defects in materials and workmanship when used normally in accordance with Avenview's enclosed manual guidelines for a period of THREE (3) YEARS from the date of original retail purchase - Warranty Period. Avenview's published guidelines include but are not limited to information contained in technical specifications, user manuals and service communications.

LABOR: During the Warranty Period of THREE (3) YEARS, Avenview will repair or replace the product(s) at no cost using new or used parts equivalent to novel performance and reliability if the product(s) is determined to have abide by Avenview's published guidelines. Cost of Labor applicable to product(s) after Warranty Period. For labor costs, please contact support@avenview.com.

PARTS: During the Warranty Period of of THREE (3) YEARS, Avenview will supply new or rebuilt replacements in exchange for defective parts of the product(s) at no cost if the product(s) is determined to have abide by Avenview's published guidelines. Cost of Parts applicable to product(s) after Warranty Period. For part(s) costs, please contact support@avenview.com.

To obtain Warranty: (a) proof of purchase in the form of a bill of sale or receipted invoice reflecting that the registered product(s) is within warranty period must be presented to obtain warranty service; (b) product(s) must be registered at time of purchase. Failure to do so will result in applicable parts and labor charges. Returning product(s) must be shipped in Avenview's original packaging or in packaging pertaining equal degree of protection to Avenview's. Both Avenview and purchaser are responsible for freight charges and brokerages when shipping the product(s) to the receiver.

NOT COVERED BY THIS WARRANTY

This warranty does not apply to any non-Avenview branded product(s); non-registered Avenview product(s). This warranty does not apply: (a) to cosmetic damage, including but not limited to scratches, dents and broken cords; (b) to damage caused by use with another product; (c) to damage caused by accident, abuse, misuse, liquid contact, fire, earthquake or other external cause; (d) to damage caused by operating the Avenview product(s) outside Avenview's manuals or guidelines; (e) to damage caused by service performed by anyone who is not a representative of Avenview or an Avenview authorized personnel; (f) to defects caused by normal wear and tear or otherwise due to the normal aging of the Avenview product(s), or (g) if any serial number has been removed or defaced from the Avenview product(s).

AVENVIEW IS NOT LIABLE FOR DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY OR CONDITION, OR UNDER ANY OTHER LEGAL THEORY, INCLUDING BUT NOT LIMITED TO LOSS OF USE; LOSS OF REVENUE; LOSS OF ACTUAL OR ANTICIPATED PROFITS (INCLUDING LOSS OF PROFITS ON CONTRACTS); LOSS OF THE USE OF MONEY; LOSS OF ANTICIPATED SAVINGS; LOSS OF BUSINESS; LOSS OF OPPORTUNITY; LOSS OF GOODWILL; LOSS OF REPUTATION; LOSS OF, DAMAGE TO, COMPROMISE OR CORRUPTION OF DATA; OR ANY INDIRECT OR CONSEQUENTIAL LOSS OR DAMAGE REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE CONSUMER.

Some states do not allow the inclusion or limitation of incidental or consequential damages, or allow limitations on duration implements of the Warranty Period; therefore the above limitations or exclusions may not be applicable to you. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Avenview

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Control Your Video

TECHNICAL SUPPORT

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Email: info@avenview.com	Fax: +1 866 387 8764		
Sales: sales@avenview.com	Email: info@avenview.com		