



Control Your Video

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

Advanced Dual Screen Multiviewer



Model #: DVI-SPLITPRO-2X

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Product Application & Market Sectors



Corporate



House Of Worship



Military



Residential



Education



Industrial



Medical



Aviation



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SECTION I: GETTING STARTED

I.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.
 - 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.

I.2 SAFETY INSTRUCTIONS

The Avenview DVI-SPLITPRO-2X Advanced Dual Screen Video processor has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipment's, the DVI-SPLITPRO-2X 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.
- When the DVI-SPLITPRO-2X is switched off, 5-10 seconds is required to re-power the device again, this allows the power capacitors to discharge and prevents any accidental damage to main board.
 - The DVI-SPLITPRO-2X can be controlled with a control software compatible with Microsoft Windows 98, 2000, XP, 7, 8 RS-232 serial control.
 - Before launching control software, the connection between the computer COM port and the DVI-SPLITPRO-2X should be established.



1.3 REGULATORY NOTICES FEDERAL COMMUNICATIONS COMMISSION (FCC)

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
	<p>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.</p>
	<p>DO NOT TAMPER WITH THE UNIT. DOING SO WILL VOID THE WARRANTY AND CONTINUED USE OF THE PRODUCT.</p>
	<p>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.</p>
	<p>⚠ WARNING</p> <p>Read & understand user guide before using this device.</p> <p>Failure to follow the proper installation instructions could result in damage to the product and preventing expected results.</p>



2. INTRODUCTION

The **DVI-SPLITPRO-2X Advanced Dual Screen Multiviewer with IR Remote Control** is an advanced video processor for most multimedia presentations. This unit is an ideal solution for applications where two video signals must be displayed on a single display. It supports multiple types of video inputs, of which two can be outputted simultaneously with the desired display layout through software control. The advanced video processor allows you to manipulate the output images to various sizes and multiple positions on the desired display. This unit can be controlled with the ease of the front panel buttons, IR remote and RS232 via a cable or control system, this functionality allows the user to easily set the desired outputs by 2 preset layouts or 8 custom layouts saved by the user.

The embedded scaler and software support EDID management converts signals from input sources to match the native resolution of monitors, flat panel displays, projectors as well as user-selectable output settings up to WUXGA (1920x1200). Dual outputs are provided (DVI) or (DVI/HDMI) format, one is connected to remote display and the other is connected to on-site display for real time monitoring.

The DVI-SPLITPRO-2X features:

Rotation: 90,180,270 on any single input, the user can input manually size measurements or use the mouse via the control software to resize and position as required.

Chromakey: This device can input 2 DVI/HDMI digital sources which are required for layering the two images or video streams together based on color hues (chroma range). Either Input 1 is the background or Input 2 is the top image. This device can be configured with the OSD, IR Remote, RS232 or Front Panel buttons to set the desired layout configuration.

FEATURES:

- 2 x Dual DVI inputs and 2 x Dual DVI outputs
- INPUT Resolutions support from 640x480 to 1920x1200, interlaced or progressive
- OUTPUT Resolutions support from 640x480 to 1920x1200, progressive
- INPUT: Adjust image size & position through control software
- OUTPUT: Rotate 90,180,270 Scale, Resize, Position, Zoom, and Crop
- Supports each input on separate screen, Full Screen or Rotated
- Supports PAP Horizontal or Vertical, PIP, and
- Firmware upgradable for support of new features and technology enhancements.
- Visible borders with text labels for easy identification and colored backgrounds
- Supports video screen splitter, a video converter and a video switcher
- Software control through RS-232 and Ethernet
- 1U size



2.1 PACKAGE CONTENTS

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

1	DVI-SPLITPRO-2X	X1	
6	RACK MOUNTING KIT	X1	
8	IR REMOTE CONTROL	X1	
9	SOFTWARE CD	X1	
10	AC POWER SUPPLY	X1	
11	USER MANUAL	X1	



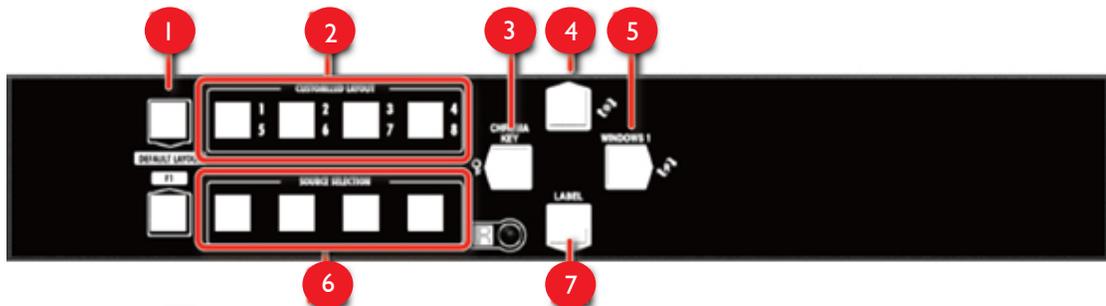
2.2 BEFORE INSTALLATION

- 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.

2.3 PANEL DESCRIPTION

Avenview Advanced Dual Screen Video processor (DVI-SPLITPRO-2X) has 2 inputs and accepts both graphics and video signals, which come from any source through (HDMI/DVI) and display it simultaneously on the same screen.

2.3.1 DVI-SPLITPRO-2X FRONT PANEL

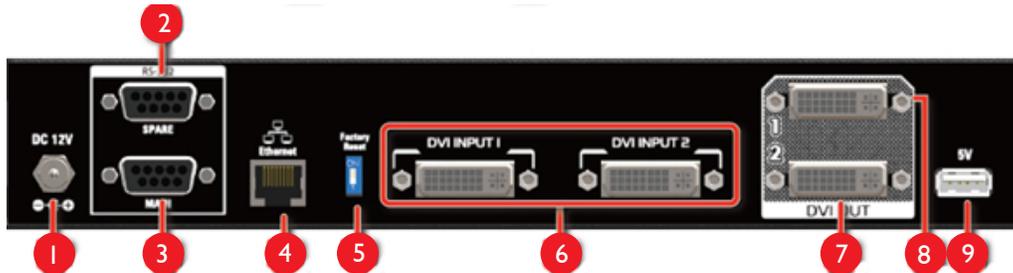


<p>1. Default Layout PAP Horizontal PAP: The light of button 4 is off. Vertical PAP: The light of button 4 is always shine.</p>	<p>2. Custom Layout 1-8 Custom layout 1-4: The light of button 4 is off. Custom layout 1-4: The light of button 4 is always shine.</p>
<p>3. Chroma key: Chroma key function on/off</p>	<p>4. Function Selection</p>
<p>5. Rotation: Rotate function on/off</p>	<p>6. Source Selection Button Window in full screen mode: The light of button 4 is off. Source selection: The light of button 4 is always shine.</p>
<p>7. OSD: All Windows OSD on/off</p>	



PANEL DESCRIPTION

2.3.2 DVI-SPLITPRO-2X REAR PANEL



1. Power Outlet: 12V DC power jack	2. RS-232: RS-232 control port
3. RS-232: RS-232 control port for F/W update	4. Ethernet: Ethernet control port
5. Dip Switch	6. Input 1-2: DVI input 1 and 2
7. Output: DVI output 2	8. Output: DVI output 1
9. USB 5V	

The DVI input and output on the DVI-SPLITPRO-2X is also compatible with HDMI. please see the example of the cable above to use.

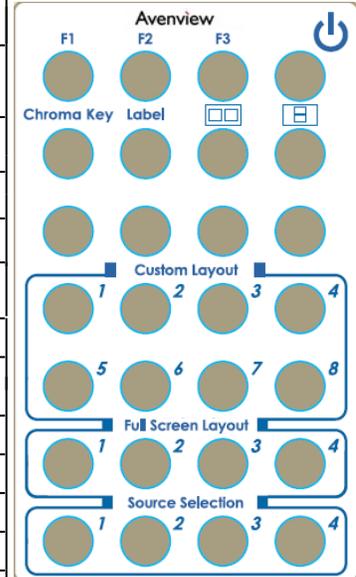
Note: Cable not included with packaging contents DVI to HDMI



3. IR REMOTE CONTROL

Avenview DVI-SPLITPRO-2X, Advanced Dual Screen processor ships with a compact IR Remote Control that allows for direct access to most commands used to control the video processor.

IR REMOTE BUTTON DEFINE	
1. F1	Reserved
2. F2	Reserved
3. F3	Reserved
4. 	Power on/off
5. Chroma Key	Chroma key function on/off
6. label	Window Label on/off
7. 	Default Layout 1
8. 	Default Layout 2
9. Custom Layout 1	Custom Layout 1
10. Custom Layout 2	Custom Layout 2
11. Custom Layout 3	Custom Layout 3
12. Custom Layout 4	Custom Layout 4
13. Custom Layout 5	Custom Layout 5
14. Custom Layout 6	Custom Layout 6
15. Custom Layout 7	Custom Layout 7
16. Custom Layout 8	Custom Layout 8
17. Full Screen Layout 1	Windows 1 in full screen
18. Full Screen layout 2	Windows 2 in full screen
19. Full Screen Layout 3	Windows 3 in full screen
20. Full Screen Layout 4	Windows 4 in full screen
21. Source Selection 1	Window 1 source selection
22. Source Selection 2	Window 2 source selection
23. Source Selection 3	Window 3 source selection
24. Source Selection 4	Window 4 source selection



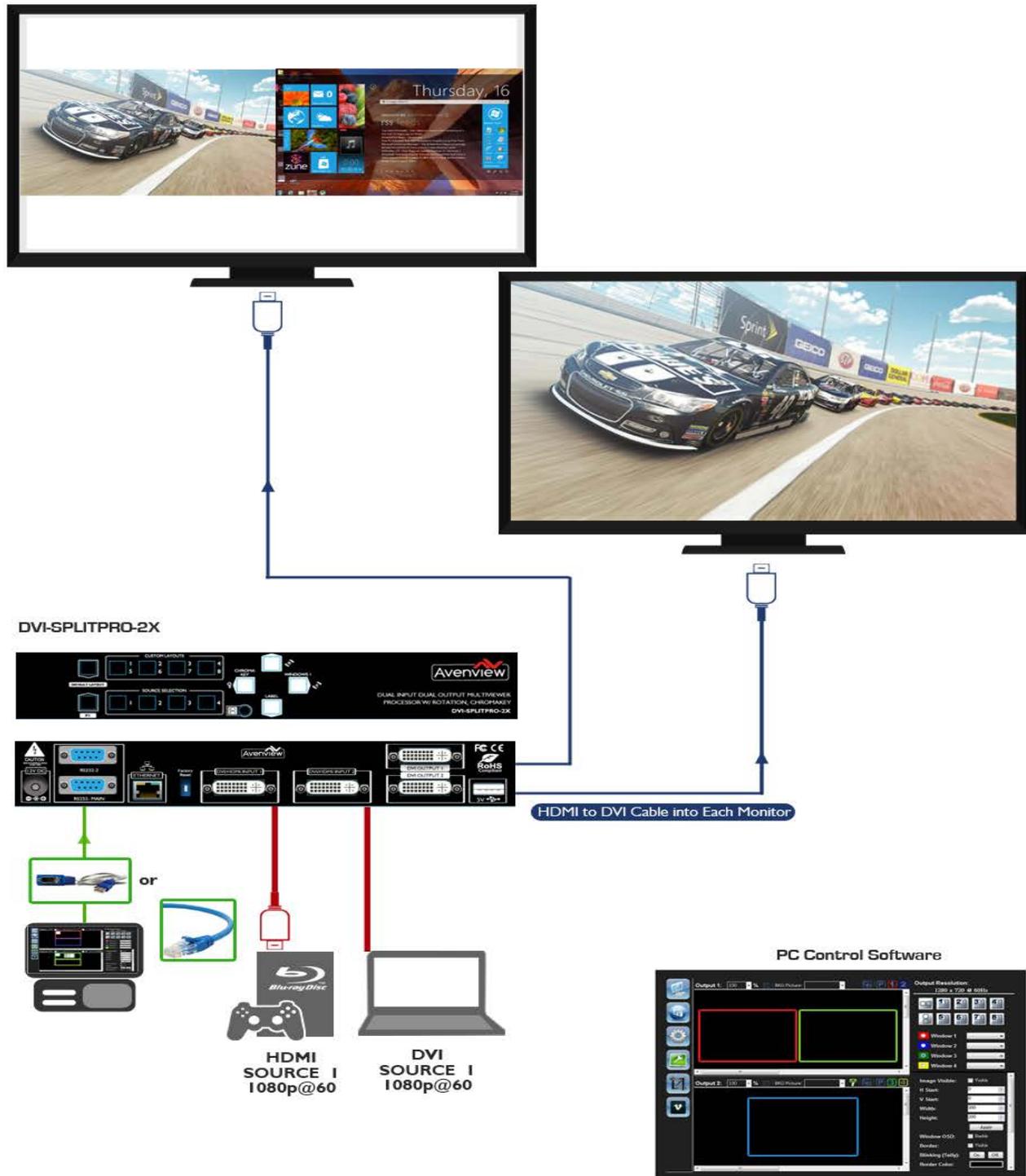
4. APPLICATION DIAGRAM

DVI-SPLITPRO-2X

LAYOUT 1- DUAL INPUT AND OUTPUT
 PICTURE ASIDE PICTURE / FULL SCREEN

CABLE INDEX

- Output ■
- Input / Source ■
- RS-232 ■
- CAT-5 / CAT-6 ■



5. SOFTWARE CONTROL

5.1 Software Installation

1. The DVI-SPLITPRO-2X provides a software control program which runs under Microsoft Windows 98, 2000, Xp, Vista, 7 through the interface of RS-232 serial control.
2. Before you click on the icon of the software, make sure you have secured the connection between your computer COM port and the DVI-SPLITPRO-2X.
3. Install driver for RS232 to USB adapter
4. Once DVI-SPLITPRO-2X is turned on, it display green LED light

Ensure that correct driver for RS232-USB Adapter (included with DVI-SPLITPRO-2X) is installed.

You can check "Device Manger" under "Ports" page to check if drivers are installed correctly.

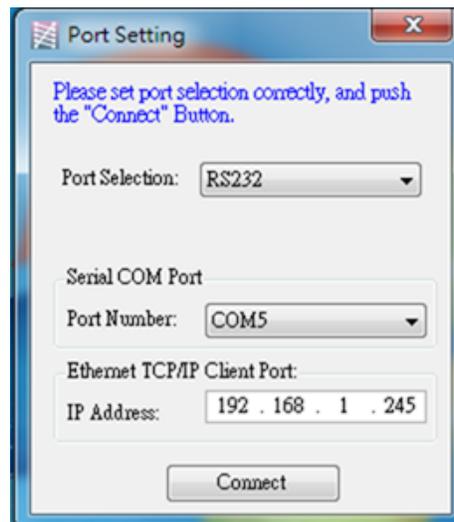
Run the Software, a dialog box (see below) will pop-up. (under Microsoft Windows 7, please run as administrator).

Two methods of connection can be used:

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

OR

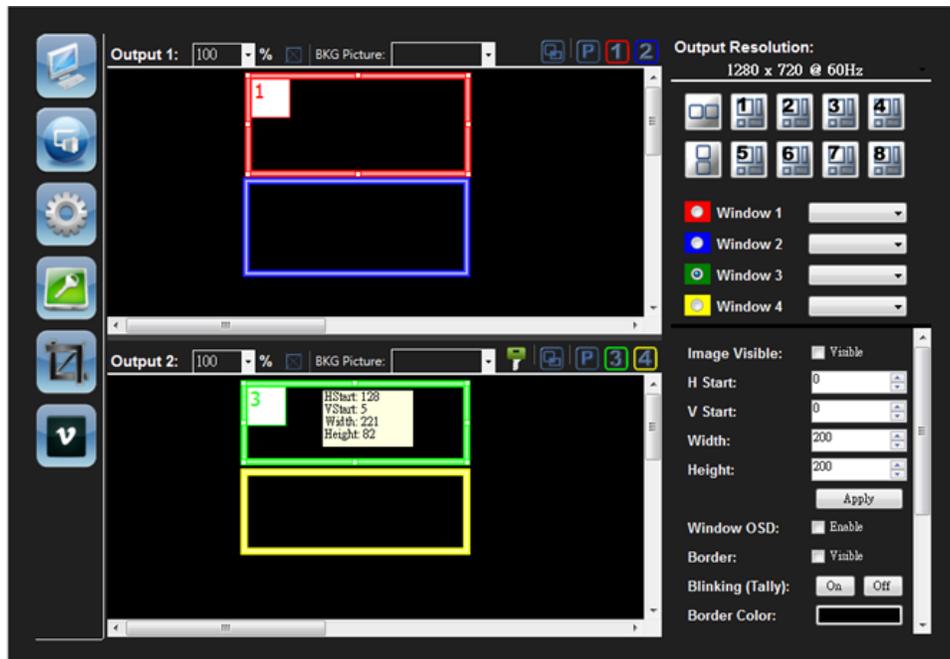
2- **TCP/IP Mode:** Enter the device IP address and click "connect button".



Once connection between the computer and the DVI-SPLITPRO-2X is established, the Control Interface will be displayed.



5.2 Control Interface



1. PAP Panel

Display and adjust the window size, position and different settings.

- **Output 1:** 100 % Control percent: 10~ 100% to set the PAP Panel display/control size.
-  Stretch: Fix the size ratio when the window is resizing.
- **BKG Picture:**  Background picture: To set up the background picture of window.
-  Window priority
-  PAP mode
-  Window 1 in full screen
-  Window 2 in full screen

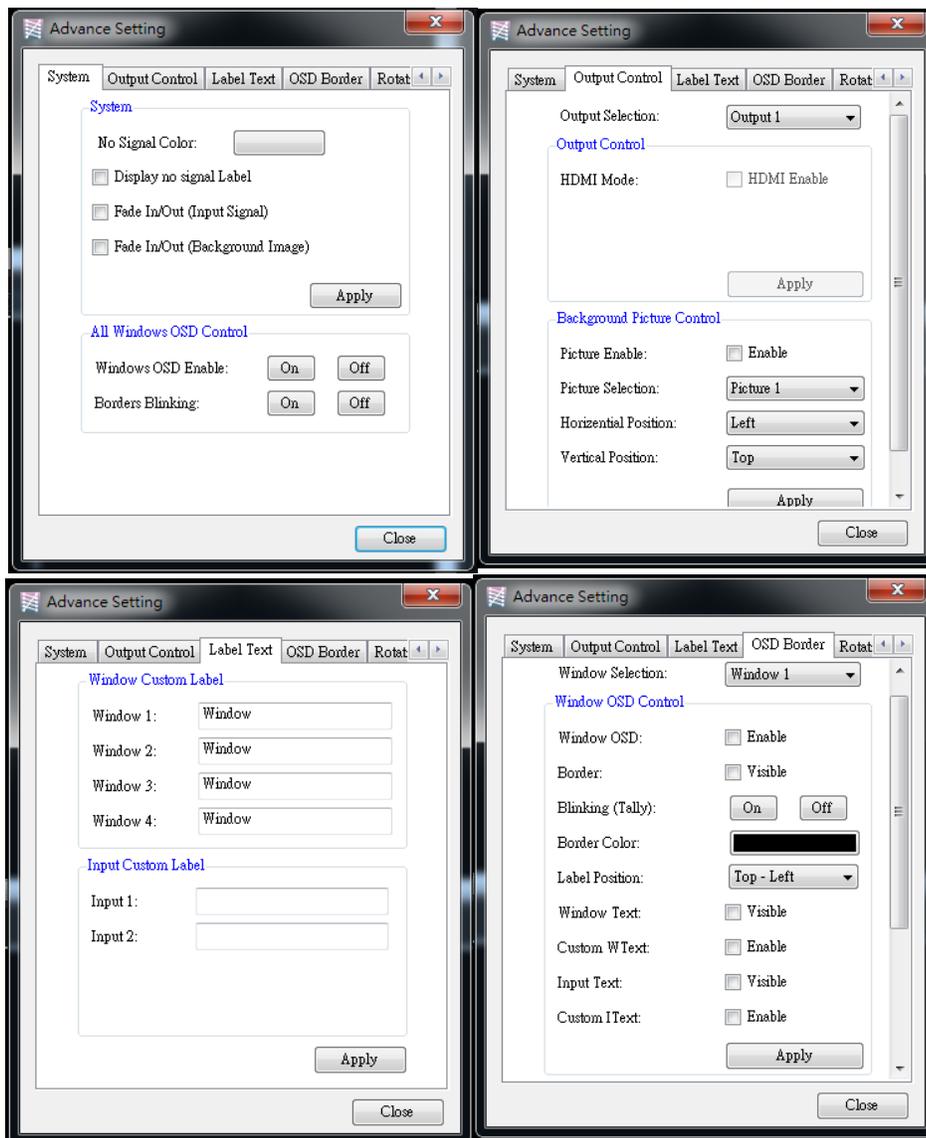
In addition, you can change the output layout by clicking the mouse left button. It has four different layouts (Dual Horizontal Output, Dual Vertical Output, Single Output 1, and Single Output 2).



2. Tool Bar list:

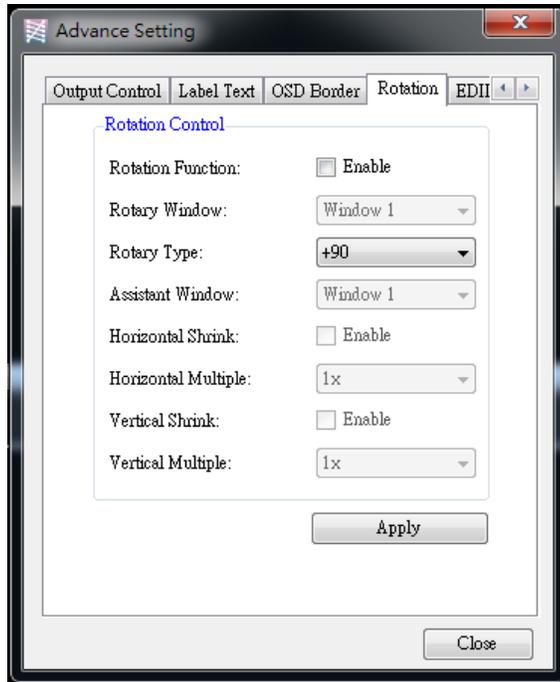


- (1)  **Status:** Get all information of the device and update this software state.
- (2)  **Port Setting:** Pop-up the “Port Setting” dialog, user can change the connecting way.
- (3)  **Advance Setting:** In this function, user can set the no signal color, fade in/out effect, background picture, window text, input text, OSD border, rotation, EDID and factory reset.



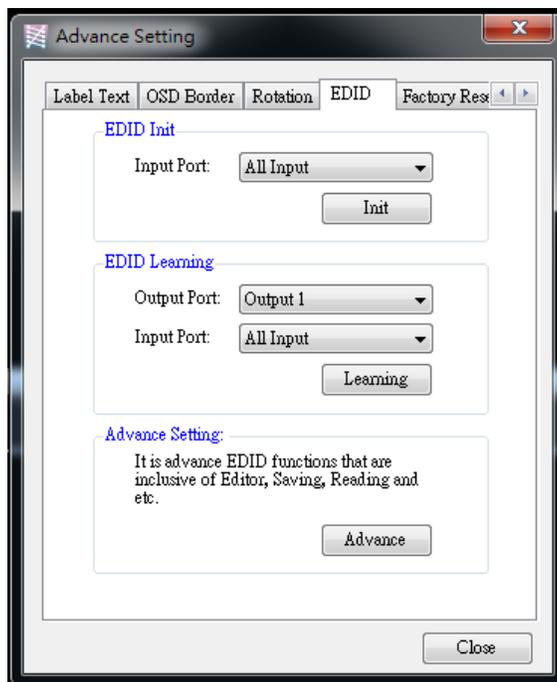
➤ **Rotation:**

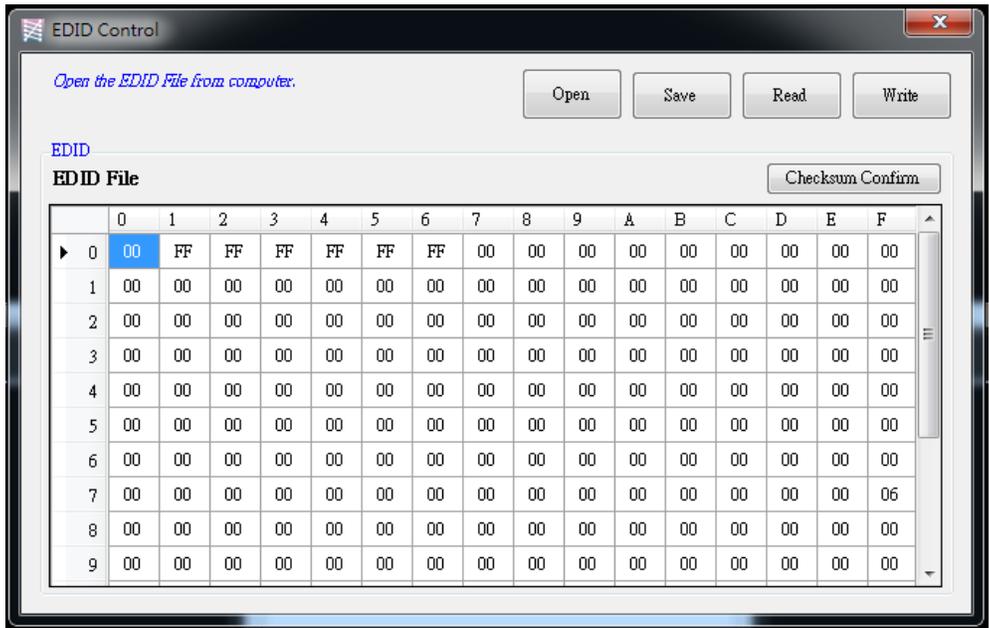
For Rotation function, only window 1 can be applied.



➤ **EDID:**

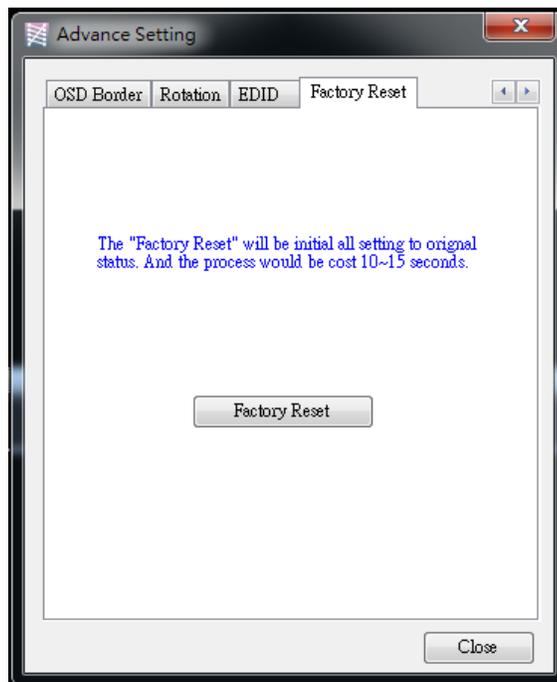
User can learn EDID from default or display. In addition, it also provides advance EDID function for user to edit, save and read.



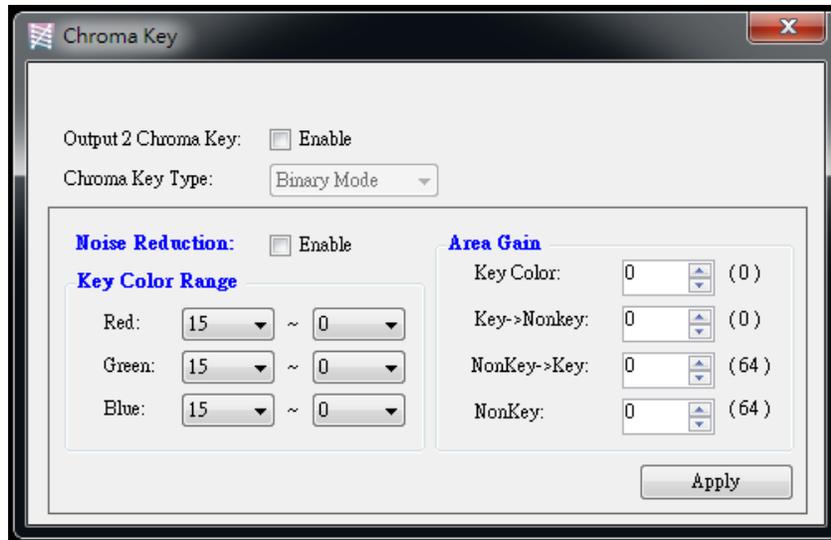


➤ Factory Reset:

Click the button to do factory default reset. This default reset process will take about 10~15 seconds and it will be initialized all setting to original system state.



- (4)  Chroma Key: It can turn on/off the Chroma key function and adjust the parameters of Chroma key.



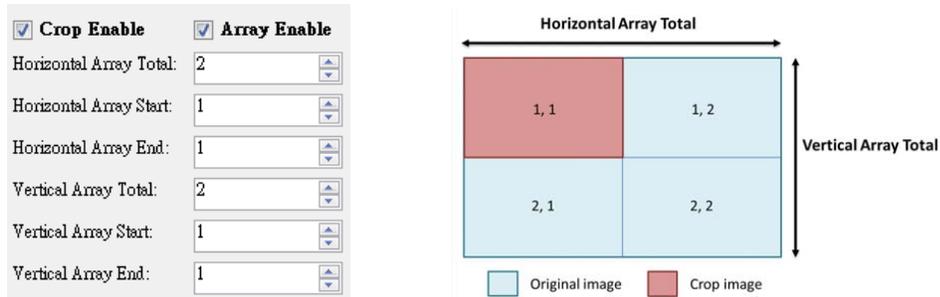
- (5)  Crop function: This function is used to crop or clip an image.



In the Preview Crop, it can preview the range and effect of video crop with the adjustment.

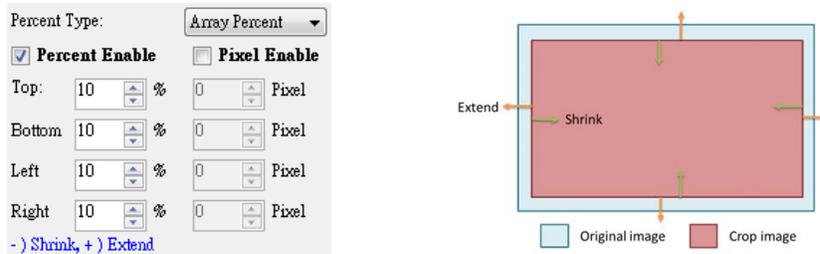
- Crop Enable: Enable crop function
- Array Enable: Enable array parameter

The setup diagram is shown as below.



- Percent Enable: Allows user to adjust video layout size by percentage concept.

The setup diagram is shown as below.



- Pixel Enable: Allow user to adjust video layout size by pixels.

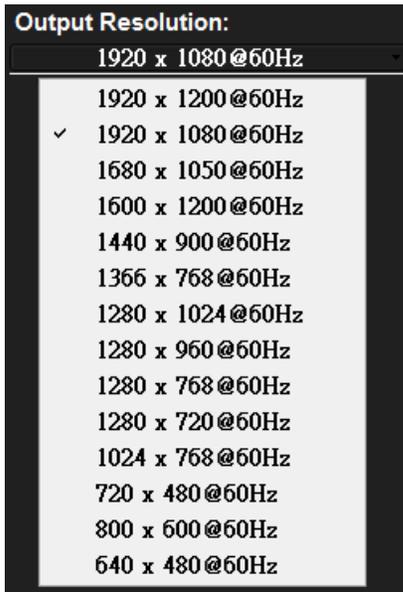
The video crop by pixel and percent are almost same. The differences come from the adjustment ratio.

- (6)  Version: Read the software and firmware version.



3. Output Resolution:

Set the output resolution. When setting the different resolutions, the parameters of PAP and custom layout (position and size) will accordingly change.



4. Default layout and Custom layout:



-  Default layout: Use factory preloaded video layouts.

-  Custom layout: Use custom pre-saved video layouts

In this part, you can adjust the size and position of output screen. If you want to save the layout, please click the right button of mouse to save this layout into device.



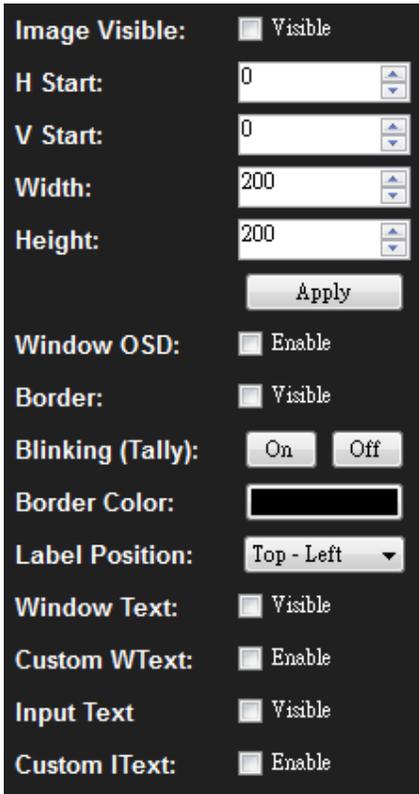
5. Window selection and input mapping

For each display window, user can assign arbitrary video input here.



6. Window setting

In here, you can adjust the size, position or other settings of the specified window.



6. SPECIFICATIONS

MODEL	DVI-SPLITPRO-4X
DESCRIPTION	Advanced Dual Screen Video processor with front panel and IR Control
DUAL OUTPUT SUPPORT	yes (DVI & HDMI)
BACKGROUND VIDEO INPUT	yes
HDCP COMPLIANCE	yes
VIDEO BANDWIDTH	DVI [Single-link 4.95Gbps] HDMI [2.25G to 6.75Gbps]
SUPPORTED RESOLUTIONS	480i / 480p / 720p / 1080i / 1080p (60) / 1920x1200@75 / 1600x1200@60
AUDIO SUPPORT	No
CONTROL	RS232 / IP Control
EMBEDDED VIDEO MIXER	yes
ABILITY TO CASCADE	yes
INPUT TMDS SIGNAL	1.2 Volts (peak – peak)
ESD PROTECTION	Human body model - ± 15 kV (air gap discharge) & ± 8 kV (contact discharge)
INPUT	2x DVI/HDMI
	2x RS-232
	1x RJ-45
OUTPUT	2 x DVI (Also supports HDMI 1.2 signal by DVI to HDMI Cable)
DVI CONNECTOR TYPE	DVI-I (29-pin female)
RS232 CONNECTOR	DE-9 (9-pin D-sub female)
RJ45 CONNECTOR	WE/SS 8p8C with 2 LED indicators
DIMENSIONS	10.3" x 7.6" x 1.7" (L x W x H)
WEIGHT	6.4 lbs
SIZE	1u Rack-mount with ears
POWER SUPPLY	AC 100-240V
POWER CONSUMPTION	5.75 Watts (max)
OPERATING TEMPERATURE	0~40°C [32~104°F]
STORAGE TEMPERATURE	-20~60°C [-4~140°F]
RELATIVE HUMIDITY	20~90% RH [no condensation]



Notes



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 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).

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