



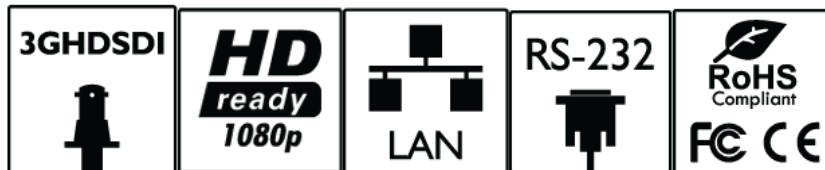
AV Connectivity, Distribution
And Beyond...

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

Advanced SDI Quad Screen Multiviewer



Model #: SDI-SPLITPRO-4S



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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 SDI-SPLITPRO-4S Advanced Quad 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 SDI-SPLITPRO-4S 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.



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>
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2. INTRODUCTION

The **SDI-SPLITPRO-4S Advanced 3G/HD/SD-SDI Quad-view Video Processor** is an advanced video processor for multimedia presentations and ideal for surveillance applications. This unit is an ideal solution for applications where four video signals must be displayed on a single display. It supports up to 4 SDI video inputs, which 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 RS232 via a cable or control system, this functionality allows the user to easily set the desired outputs by 5 preset layouts or 8 custom layouts saved by the user.






The embedded scalar 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 in both digital (SDI) and digital (DVI) or (DVI/HDMI) format, one is connected to remote display and the other is connected to on-site display for real time monitoring.

- Supports 3G/HD/SD SDI video formats
- Input resolutions support interlaced or progressive video under SMPTE.
- Dual outputs DVI(640x480 to 1920x1200) / SDI(720P, 1080P)
- Each SDI channel has 1 re-clocked SDI loop-outs.
- Adjustable size & position through software.
- Image parameters and layouts are automatically saved in flash memory and can be recalled for future use.
- User-selectable output settings, up to 1920x1200(Only for DVI).
- Perfectly as a video screen splitter, a video converter and a video switcher.
- Firmware upgradable for support of new features and technology enhancements.
- Software control through RS-232.
- Control protocol available for customer proprietary design
- 1U size.



3. PACKAGE CONTENTS

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

1	SDI-SPLITPRO-4S	
1	Rack Mounting Kit	1U rack mounting ear
1	RS232 to USB Adapter	
1	Software CD	
1	12V Power Brick	
1	AC Power Cord	
1	User's Manual	

4. 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 optical cable. It can cause malfunction.



5. PANEL DESCRIPTION

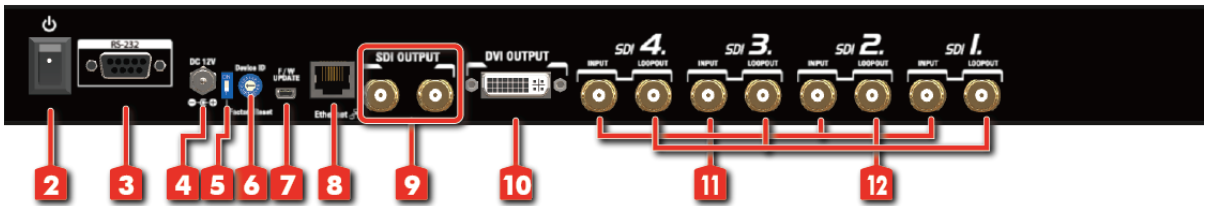
Avenview Quad Screen Video Processor (SDI-SPLITPRO-4S) has 4 inputs, 2 Main outputs, 4 SDI Local Loop out to local monitors as well as DVI output accepts both graphics and video signals, which come from SDI, composite video sources respectively.

INPUT PANEL (SDI-SPLITPRO-4S) Front



1. Power indicator

INPUT PANEL (SDI-SPLITPRO-4S) Rear



2. Power Switch: On/OFF	3. RS-232: To Send Serial Commands
4. Power Supply: 12V DC	5. Dip Switch: Factory Reset
6. Device ID: To identify between units	7. USB: Firmware Update
8. Ethernet: To connect via IP	9. Outputs: 2 x SDI Outputs
10. Outputs: DVI Output	11. Inputs: 4 x SDI inputs
12. Loop Out: 4 x SDI Local Loop out	



6. SDI-SPLITPRO-4S I/O CONNECTORS

CONNECTORS		VIDEO SOURCE
INPUT	SDI	SDI
		CVBS
OUTPUT	DUAL SDI/DVI-D OUT	Display
		1 x DVI/HDMI Display [165MHz]
		2 x SDI
		4 x SDI LOCAL LOOP with Re-Clocking





7. INSTALLATION

To setup Avenview SDI-SPLITPRO-4S follow these steps for connecting to a device:

1. Mount or fix the SDI-SPLITPRO-4S safely
2. Switch off SDI-SPLITPRO-4S and all source devices and displays that will be connected
3. Connect a monitor, projector and any HD displays that come with DVI / HDMI inputs by using 1 male – male DVI cable to SDI-SPLITPRO-4S DVI output. (you can connect 2 displays equipped with DVI and SDI.
4. Connect FOUR (4) devices equipped with SDI output (such as broadcast camera) which can output 3G/HD/SD video signals to the BNC input connectors to the SDI connector on the rear of the unit.
5. Connect your computer to SDI-SPLITPRO-4S via RS232 cable and then install the software
6. Turn ON SDI-SPLITPRO-4S
7. Run the Control Software and establish the connection between PC and SDI-SPLITPRO-4S
8. Turn ON all connected devices and then control the display output thru RS232 and included software

8. INSTALLATION

1. The SDI-SPLITPRO-4S 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 SDI-SPLITPRO-4S.
3. Install driver for RS232 to USB adapter
4. Once SDI-SPLITPRO-4S is turned on, it display green LED light

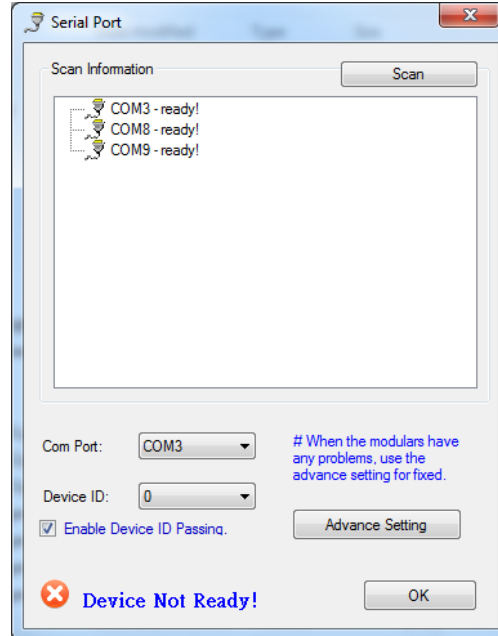
Ensure that correct driver for RS232-USB Adapter (included with SDI-SPLITPRO-4S/K) is installed.

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

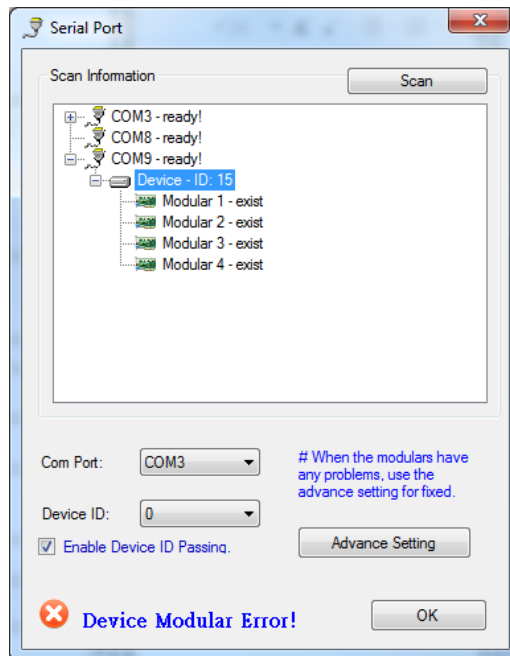


9. SOFTWARE SETUP GUIDE

1. Power up the SDI-SPLITPRO-4S and you can see VFD on the front panel blink.
2. Launch Avenview Control Software. It will open following “Serial Port” setting page.

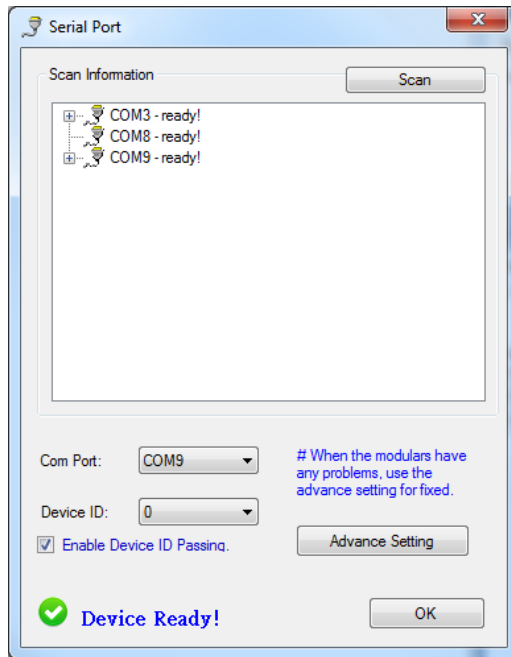


3. Click on Scan button and it will automatically detect Avenview Video Processor and display the following screen:

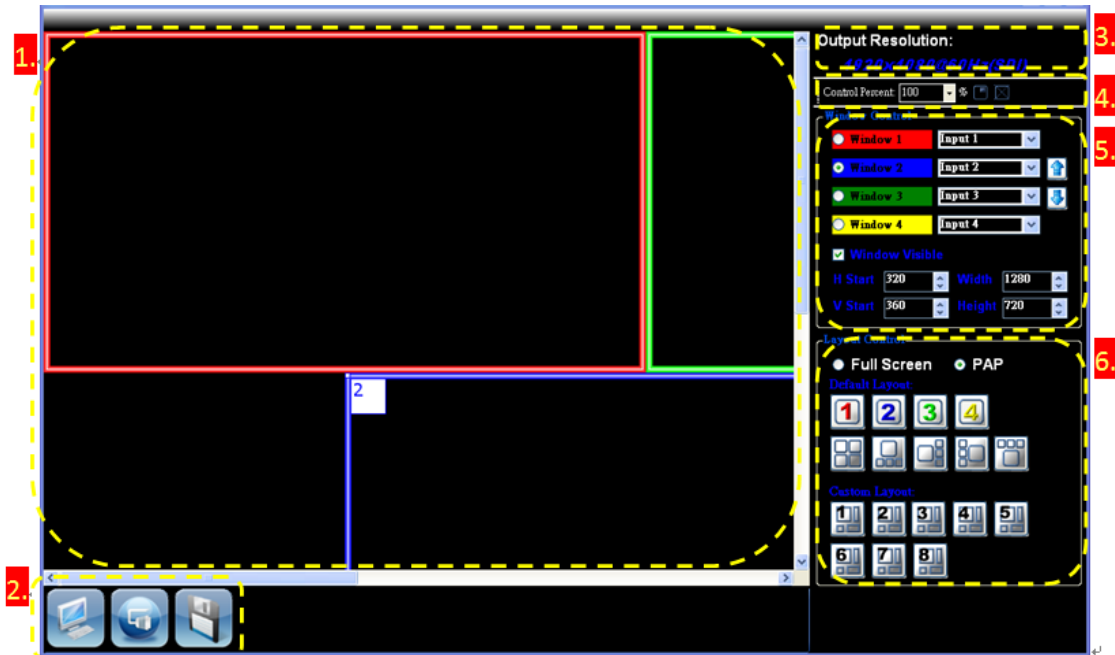


4. Note the “Device – ID” and Select Correct “Com Port” and Device ID” from bottom of screen. Once Correct “Com Port” and “Device ID” is selected, it will change “Device Modular Error” to “Device Ready” as shown below:





5. Once Device is Ready, click “OK” and Avenview Control Software will launch






1

MAIN Input Panel

This window displays the inputs Size and position on the desired output monitor.

2

Toolbar Icons

1.  **CPU ICON**- retrieves the data from the device and updates the software state.
2.  **RS-232 ICON**- Opens the RS-232 settings window.
3.  **SAVE ICON**-Opens the Custom Layout Setting Window

3


OUTPUT RESOLUTION

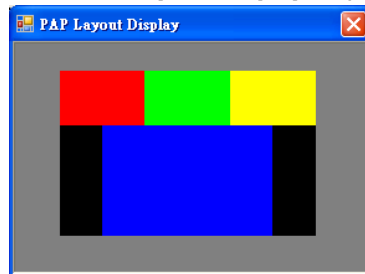
SUPPORTED MODE	RESOLUTION	SUPPORTED MODE	RESOLUTION
HDTV 1080p	1920x1080@60Hz (SDI)	VESA	1280x1024 @ 60Hz
VESA	1680x1050@60Hz	VESA	1280x960 @ 60Hz
VESA	1600x1200 @ 60Hz	VESA	1280x768 @ 60Hz
VESA	1440x900 @ 60Hz	HDTV 720p	1280x720 @ 60Hz (SDI)
VESA	1366x768 @ 60Hz	VESA	1024x768 @ 60Hz




4

Main Panel Setting




1. **Control Percent 10-100%**-This percentage control allows the user to control the window size of the Main Panel to view all the inputs easily.
2.  **PAP Layout Display** – opens the PAP Layout Display Window




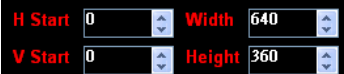
3.  **Lock Aspect Ratio**- Fix the size ratio when the window is resizing.

5

PAP Mode Control/Input Selection

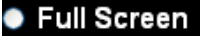





1.  **Window 1 Main Window**: The user can set the visible, position, size, polarity and default layout.
2.  **Input Selection**: Set the window to what input.
3.  **Window Polarity**: Set the main window layer polarity in "PAP Mode".








4.  **Window Visible** Window Visible: Set the window visible in “PAP Mode”.
5.  **Window Position and Size**: Set the window position and size in “PAP Mode”.

6




FULL SCREEN /PAP MODE

1.  **Full Screen** Full Screen: Set the MAIN window to Full Screen.
 1.  Set Window 1 Full Screen
 2.  Set Window 2 Full Screen
 3.  Set Window 3 Full Screen
 4.  Set Window 4 Full Screen
2.  **PAP** PAP Mode: Set to last PAP layout.
3. **Default Layout**: The user can set the layout on the Monitor by selecting the Five (5) preset layout defined in the device.

	Panel Cross
	*Panel Right – Type
	*Panel Left – Type
	* Panel Top – Type
	*Panel Bottom - Type

NOTE: THE “MAIN WINDOW” WILL BE THE LARGEST SIZE IN THE ICON.

4. **Custom Layout-** The user can create their own layout and design of by selecting the EIGHT

(8) Custom Layout Tabs   . These layouts can be save by

selecting the  SAVE ICON in the Toolbar List



10. SPECIFICATIONS

MODEL	SDI-SPLITPRO-4S
DESCRIPTION	Advanced Quad Screen Video Processor with Front Panel and IR Control
DUAL OUTPUT SUPPORT	Yes [DVI & SDI]
BACKGROUND VIDEO INPUT	No
HDCP COMPLIANCE	Yes
VIDEO BANDWIDTH	DVI/HDMI[165MHz] SDI 3G/HD/SD
SUPPORTED RESOLUTIONS	480i / 576i / 720p / 1080i / 1080p
AUDIO SUPPORT	No
CONTROL	RS232 / Ethernet
EMBEDDED VIDEO MIXER	Yes
ABILITY TO CASCADE	No
INPUT TMDS SIGNAL	1.2 Volts (peak – peak)
ESD PROTECTION	Human body model - $\pm 15kV$ (air gap discharge) & $\pm 8kV$ (contact discharge)
	4x SDI
	1 x RS232
	1 x RS485
OUTPUT	1 x DVI (Also supports HDMI signal by DVI to HDMI Cable) 2 x SDI
DVI CONNECTOR TYPE	DVI-I (29-Pin female)
BNC CONNECTOR	75 Ω inter-locked socket
RS232 CONNECTOR	DE-9 (9-pin D-sub female)
RCA CONNECTOR	75 Ω
RJ45 CONNECTOR	WE/SS 8P8C with 2 LED indicators
DIMENSIONS	11.8" x 15.3" x 1.7" (L x W x H)
SIZE	1U Rack-mount with ears
POWER SUPPLY	AC 100-240V
POWER CONSUMPTION	35 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]



II. GENERAL TROUBLESHOOTING

PROBLEM	POSSIBLE SOLUTION
NO POWER	<ul style="list-style-type: none"> • Ensure that SDI-SPLITPRO-4S is plugged in • If you are recovering from power outage, accidentally unplug the adapter or other power surge conditions, leave the device off for an at least a minute and then power it on again.
NO OR DISTORTED IMAGE	<ul style="list-style-type: none"> • Make sure all cables are in good working condition and properly connected to the SDI-SPLITPRO-4S and displays. • Configure the output video resolution so that it doesn't exceed the native resolution of the display. (in this case, the message of "out of range" is usually showed on your screen)
POOR QUALITY	<ul style="list-style-type: none"> • We suggest that don't use T-connectors to split your video source into to images displayed on two different screens. That will lower output video quality. Use a distribution amplifier instead of T-connectors. • Make sure the video source is not compressed and maintains the highest native resolution.
WRONG COLOR	<ul style="list-style-type: none"> • Press "Color Balance" key for auto configuration. <p>Auto color configuration only works at VGA and Component inputs.</p>
NO VIDEO AFTER FACTORY HARDWARE AND SOFTWARE RESET	<ul style="list-style-type: none"> • Always perform a hard power reset from the back of the unit using the power switch on back right. • In the configuration software after the factory reset navigate to: <ul style="list-style-type: none"> ➤ Advance setting button ➤ Ensure the correct COM Port is enabled ➤ Wait until Green check mark and Device Ready! is complete ➤ Proceed to "Device Setting/Testing" "Execute Selector" ➤ Select "Modular Configure" then Press Execute Button





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