StretcherPro-HD

User Manual

HDMI/DVI-D 2x2 Video Wall Controller

Smart-AVI
SMART AUDIO VIDEO INNOVATION

TABLE OF CONTENTS

WHAT'S IN THE BOX?

PART NO.	QTY	DESCRIPTION
STRP-HDS	1	StretcherPro-HD
CCPWR06	1	Power supply cord
RMT-4KWL	1	IR Remote Control
SM-EYE-NY	1	IR receiver
EN-QKVM-EAR-P	2	Rack Mounting Brackets
	1	Quick Start Guide

Figure 2-1

INTRODUCTION

To create a four-screen video wall with 1 HD video input, the StretcherPro-HD Video Wall Controller provides a truly simple plug-and-play hardware solution. The StrecherPro-HD is HDCP compliant and is capable of stretching any HD source over four screens, resolution up to 1920 x 1080. This powerful new version stretches the video image in multiple ways including: Video Wall mode, dual horizontal (2x1), dual vertical (1x2), or clone the image (1:1).

FEATURES

- Stand-Alone Unit, Requiring no Additional Hardware or Software
- Plug-and-play ready
- 4 Screen Multilayout Digital Signage / Video Wall Controller
- Supports DVI-D Input with converters
- Learns any EDID
- Internal EDID database
- Multiple configurations
- HDCP and HDMI 1.4 compliant
  Supports IR and RS-232

APPLICATIONS

- Video Walls
- Digital Signage Displays
- Information Displays
- Command Centers
- Control Rooms
- Simulation Systems
- Restaurants and Clubs
- Houses of Worship
- Convention Facilities
- Theme Parks
- Resorts
- Casinos

TECHNICAL SPECIFICATIONS

VIDEO	
Video Bandwidth	Single-link 340MHz [10.2Gbps]
Resolution HDTV	Up to 1080p
PC Resolution	up to 1920 x 1200
Input Video Signal	1.2 volts
Input DDC Signal	5 volts
Single Link Range	1080p
Format HDMI	1.4
DVI Compliance	Single-link DVI-D 2.0
Output Cable Length	Up to 20 ft.
HDCP Compliance	1.0/2.0
Input Interface	(1) HDMI
Output Interface	(4) HDMI
Connector	Type A [19-pin female]
CONTROL	
Front Panel	Buttons
RS-232	DB9 (female)
Remote Control	IR
TCP/IP	Ethernet Control
POWER	
Requirements	100-240 VAC
MECHANICAL	
Height	1.875 in.
Width	17 in.
Depth	10.75 in.
Weight	4.4 lbs.

HARDWARE INSTALLATION

1. Turn off the StretcherPro-HD.
2. Connect the HDMI source (i.e. PC, Blu-Ray Player, Digital Signage, etc.) to the HDMI INPUT port of the StretcherPro-HD using HDMI cables.
3. Connect the (4) monitors to the (4) HDMI OUTPUT ports of the StretcherPro-HD using HDMI cables for HDMI monitors and TVs, or HDMI-to-DVI adapters for DVI displays. Connect the upper left display to port 1, the upper right display to port 2, the lower left display to port 3 and the lower right display to port 4.
4. Connect the IR receiver to the IR input jack at the back of the StretcherPro-HD.
5. Optionally connect an RS-232 cable from the PC to the RS-232 port of the unit for additional control.
6. Optionally connect the RJ45 connector to a network for additional control.
7. Turn on the StretcherPro-HD.
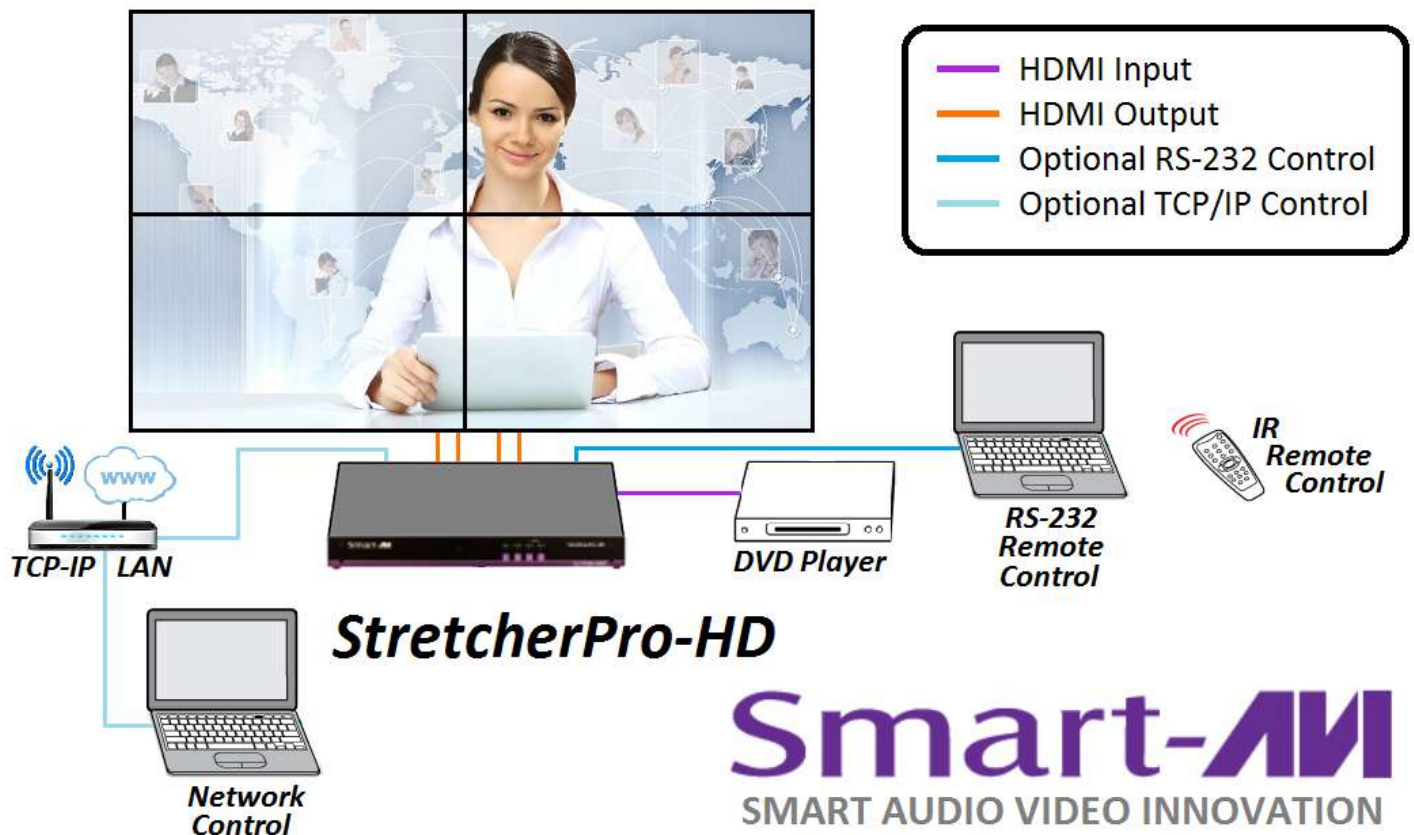8. Wait a few seconds for the unit to initialize.

Figure 5-1

FRONT PANEL CONTROL

Front Panel Buttons
- To switch to Video Wall mode, press the WALL button.
- To switch to Clone mode, press the CLONE button.
- To switch to Dual Horizontal mode, press the DUAL H button.
- To switch to Dual Vertical mode, press the DUAL V button.
- For Menu, press the DUAL H and DUAL V buttons simultaneously then use the IR Remote Control to navigate the menu.
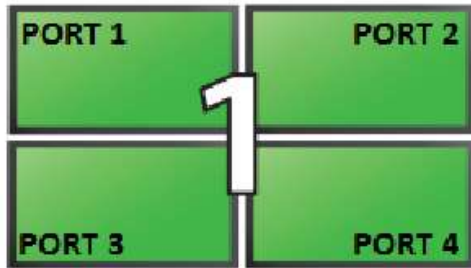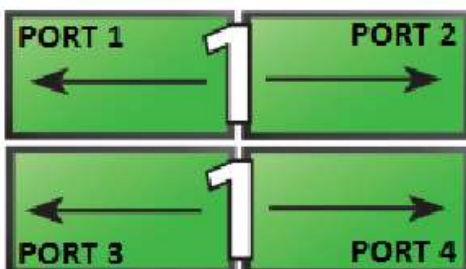

VIDEO WALL MODE: You can project the input image across four HD screens (2x2 configuration). With screen resolution of 1920x1080, users can create a stunning 4K resolution video wall display.

CLONE MODE: You can route the input image to each display individually, creating a simple and effective digital signage display.

DUAL HORIZONTAL: You can route the input image over two horizontally arranged screens two times over, creating a unique and flexible horizontal display option.
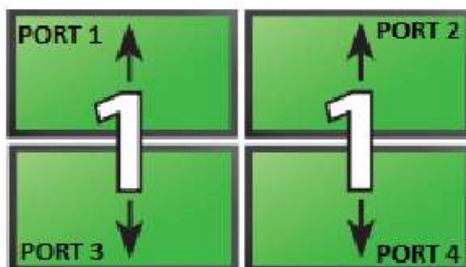
DUAL VERTICAL: Users can route the input image over two vertically arranged screens two times over, creating a unique and flexible vertical display option.

RS-232 CONTROL

The StretcherPro-HD may also be controlled via RS-232 commands. This feature requires that an RS-232 card is installed in your computer or a USB to RS-232 adapter. Check the RS-232 connections on your computer and the StretcherPro-HD to determine if you need a male to male, female to female or male to female cable.

Establish a connection to StretcherPro-HD :
1. Connect a straight-through RS-232 cable to the RS-232 connector on the PC.
2. Connect the other end of the cable to the RS-232 port of the StretcherPro-HD .
3. Power on the device.

If you need to identify the COM port used by your computer do the following:

1.   Click on the start button.
2.   Click on Control Panel.
3.   Click on Device Manager.
4.   Click on the arrow next to Ports (COM & LPT).

You should see the name of your adapter and the COM port number in use.

Setting up the Terminal Application:
Run the terminal client of your choice such as HyperTerminal or PuTTY.
Select the correct COM port on the PC.
Use the following connection settings: 115200, N, 8, 1, no flow control.
Once the connection is established type ? And hit <Enter>. The StretcherPro-HD should respond with a firmware version number and a list of available commands as shown below.

StretcherHD 1.22.22
main menu
==
-i -system information
-v -display mode and video options
-e -edid/hotplug
-a -audio
-o -osd navigator and parts load
-fr Reset to factory defaults (Not shown on menu.)
? -help

To display the video menu:
Type –v <Enter> ? <Enter>

StretcherHD 1.22.22
video menu
==
f   -clone input to outputs in full
dh -horizontal dual
dv -vertical dual
v   -videowall
s   -stretch across 4 screens
fl -flip [output channel] [1:flip | 2:unflip]
o   -[1-1080P60|2-1080P30]
ex -exit to main menu
? -help

To return to the main menu:
Type ex <Enter> ? <Enter>

IR REMOTE CONTROL

BUTTON	DESCRIPTION
MENU	Activates the OSD menu
1	
2	
3	
4	
CLONE	
ESC	Exit OSD menu
▲	Navigate up thru the OSD options
▼	Navigate down thru the OSD options
■	Select or execute
◄	Navigate OSD options
►	Navigate OSD options
INPUT	
OUTPUT	
E1	Internal EDID #1
E2	Internal EDID #2,
EL	Learn EDID from display on output #1
W 1	Wall Mode—Press W then press 1
Q	
P	
I	Clone Mode

Figure 8-2

CONTROL VIA ETHERNET

StretcherPro-HD TCP/IP control is a feature that allows mode switching and other configurations to be controlled remotely via HTTP. Manage your StretcherPro-HD with ease on your LAN or from anywhere in the world.

First you must find the IP address for the StretcherPro-HD . Finder.exe (Smart IP-Finder) is conveniently available on our website; please visit www.smartavi.com/helpful-links.html for this and our full list of compatible third-party software.

Download and execute the IP address Finder software for your product. The StretcherPro-HD and its IP address should appear in the display as shown in Figure 9-1.
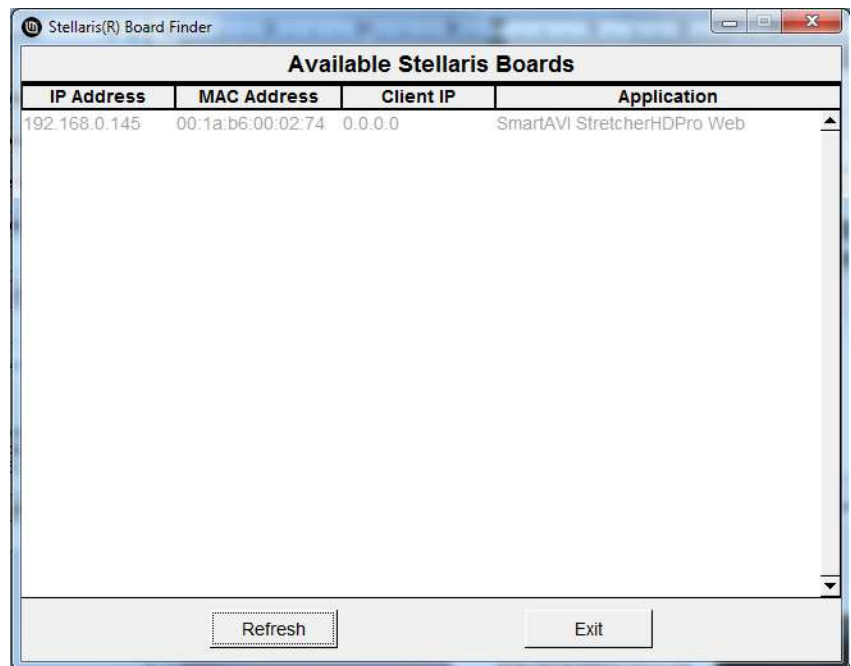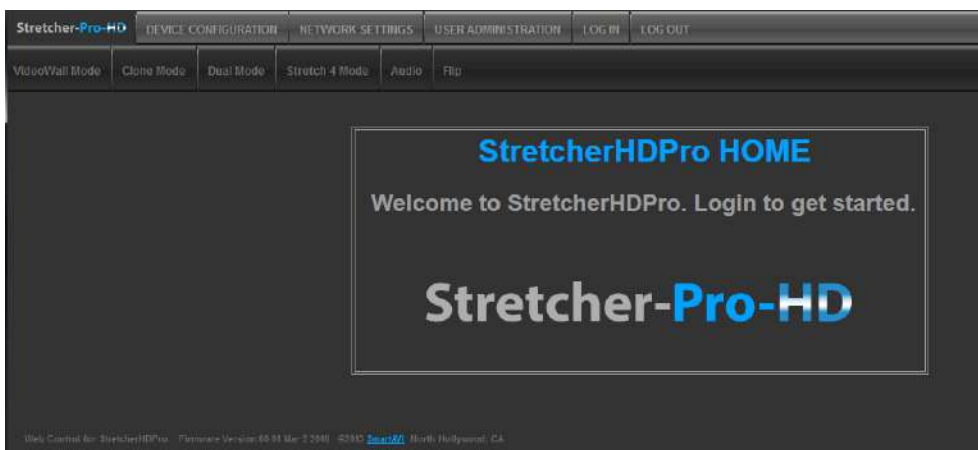

Figure 9-1

Figure 9-2

Enter the IP address into a web browser of your choice. You should see the StretcherPro-HD Home/Welcome page as shown in Figure 9-2.

Click the LOG IN tab. The username and password are case sensitive and can be changed. The default username and password are:
Username: admin
Pasword: 1234

LIMITED WARRANTY STATEMENT

A.   Extent of limited warranty

Smart-AVI Technologies, Inc. warrants to the end-user customers that the Smart-AVI product specified above will be free from defects in materials and workmanship for the duration of 1 year, which duration begins on the date of purchase by the customer. Customer is responsible for maintaining proof of date of purchase.

Smart-AVI limited warranty covers only those defects which arise as a result of normal use of the product, and do not apply to any:
>   a. Improper or inadequate maintenance or modifications
>   b. Operations outside product specifications
>   c. Mechanical abuse and exposure to severe conditions

If Smart-AVI receives, during applicable warranty period, a notice of defect, Smart-AVI will at its discretion replace or repair defective product. If Smart-AVI is unable to replace or repair defective product covered by the Smart-AVI warranty within reasonable period of time, Smart-AVI shall refund the cost of the product.

Smart-AVI shall have no obligation to repair, replace or refund unit until customer returns defective product to Smart-AVI.

Any replacement product could be new or like new, provided that it has functionality at least equal to that of the product being replaced.

Smart-AVI limited warranty is valid in any country where the covered product is distributed by Smart-AVI.

B.   Limitations of warranty

To the extant allowed by local law, neither Smart-AVI nor its third party suppliers make any other warranty or condition of any kind whether expressed or implied with respect to the Smart-AVI product, and specifically disclaim implied warranties or conditions of merchantability, satisfactory quality, and fitness for a particular purpose.

C.   Limitations of liability

To the extent allowed by local law the remedies provided in this warranty statement are the   customers sole and exclusive remedies.

To the extant allowed by local law, except for the obligations specifically set forth in this warranty statement, in no event will Smart-AVI or its third party suppliers be liable for direct, indirect, special, incidental, or consequential damages whether based on contract, tort or any other legal theory and whether advised of the possibility of such damages.

D.   Local law

To the extent that this warranty statement is inconsistent with local law, this warranty statement shall be considered modified to be consistent with such law.

Smart-AVI
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NOTICE

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