

Smart-AM

SMART AUDIO VIDEO INNOVATION

HDR-4x4-Plus



4K Resolution
4x4 HDMI Matrix Switch
Deliver 4K Resolution
While Switching Four Signals
Between Four Displays

USER MANUAL

Touchboards

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WHAT'S IN THE BOX?

PART NO.	QTY.	DESCRIPTION
HDR-4X4-Plus-S	1	4x4 HDMI Router with 4K resolution: Includes: [HDR-4X4-Plus, SRC-2A & (CCPWR06)]
User Manual	1	

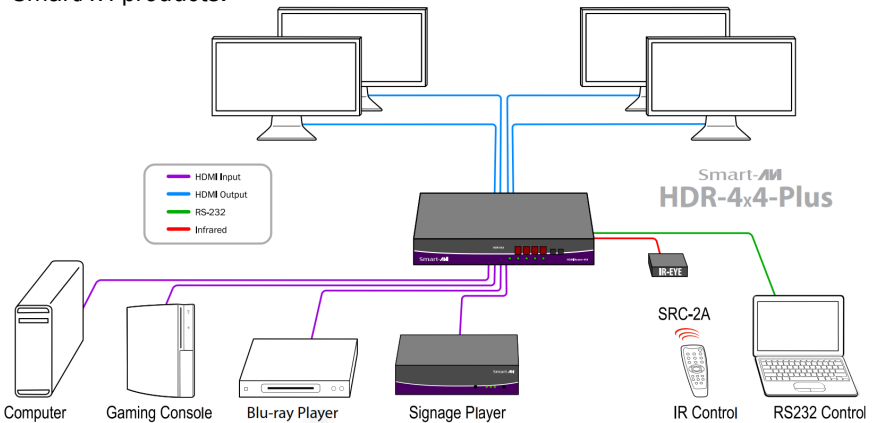
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INTRODUCTION

To distribute and switch the latest in 4K HDMI video signals, the HDR-4x4-Plus allows users to switch four HDMI inputs with four displays. Four outputs give users flexibility while routing 4K video (3840x2160 @30Hz) and audio signals to four displays. The HDR-4x4-Plus eliminates the need to disconnect and reconnect HDMI sources to a single display. The device is compatible with computer sources, live HD television feeds, Blu-ray players, gaming consoles, video cameras and more. Controlling the matrix switch is simple thanks to the front tactile buttons, the included infrared remote control, and the RS-232 port.

The HDR-4x4-Plus can be controlled by Windows®-based software that is easy to understand and simple to use – a cornerstone of all SmartAVI products.



FEATURES

- Supports 4K/2K Input/Output
- 4x4 Non-blocking, Single-link HDMI Matrix Switch
- Distributes any of the Four Inputs to any Combination of the Four HDMI Output Displays
- Includes IR Remote
- HDCP and HDMI 1.4 Compliant

APPLICATIONS

- Wall Displays
- Digital Media
- Airports
- Dealer Rooms
- Control Rooms
- Audio/Visual Presentations
- Shopping Centers
- Security
- Point-of-Sale
- Hotels/Resorts

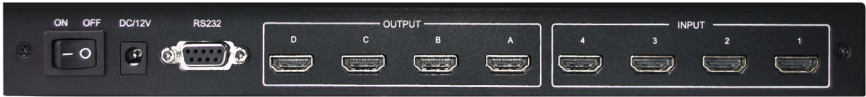
TECHNICAL SPECIFICATIONS

VIDEO	
Format	HDMI
DVI Compliance	Single-link DVI-D 1.1 with Adapter
HDCP Compliance	1.0/1.1
Video Bandwidth	Single-link 340 MHz (10.2 Gbps)
Resolution	Up to 3840x2160 @30Hz.
Input Interface	(4) HDMI (7.1 Ch. Audio & Video)
Output Interface	(4) HDMI (7.1 Ch. Audio & Video)
Connector	HDMI Type A (19-pin Female)

CONTROL	
Front Panel	Tactile Switch
IR	Via Remote Control with IR Type 3
PC	RS-232 Control
Ethernet Control	Optional (NET-IP-Pro)

OTHER	
Power	External 100-240 VAC / 12VDC2A @10W
Dimensions	11.8 in W x 1.25 in H x 5 in D
Weight	1.5 lbs
Approvals	UL, CE, ROHS Compliant
Operating Temp.	32-131 °F (0-55 °C)
Storage Temp.	-4-185 °F (-20-85 °C)
Humidity	Up to 95%

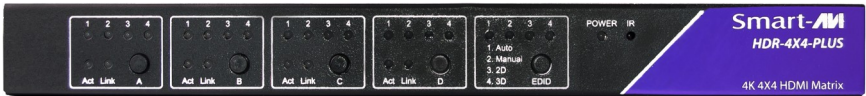
HARDWARE INSTALLATION



1. Turn off all input devices and displays.
2. Connect (4) HDMI cables from the input devices to the INPUT ports of the HDR-4x4-Plus.
3. Connect the displays to the (4) OUTPUT ports on the HDR-4x4-Plus.
4. Power on the input the devices, displays, and the HDR-4x4-Plus.

SWITCHING VIA FRONT-PANEL KEYS

Front-Panel keys



- **Button A:** Select the input source for HDMI output A
- **Button B:** Select the input source for HDMI output B
- **Button C:** Select the input source for HDMI output C
- **Button D:** Select the input source for HDMI output D
- **LEDs 1,2,3,4:** Shows the input source which is selected
- **Act:** Shows if the corresponding input signal is active
- **Link:** Shows if the sink device is connected
- **Button EDID:** Select the EDID
 - + **Auto:** Default EDID
 - + **Manual:** User can configure the EDID manually.
 - + **2D:** 2D-compatible EDID

RS-232 SWITCHING with SMARTCONTROLPRO SOFTWARE

When the software starts, you will see the configuration window.

Configure Router

Router Count: 1 Advanced Configuration

Router Type	Inputs	Outputs
00 HDR 4x4	4	4

Com Port: COM1 Router Timeout: 0.2 seconds Comm Type: Type B

- Select the COM port number where the RS-232 is plugged in.
- Choose “HDR 4x4” for *Router Type*.
- Click “OK”.

After clicking OK, you will then be working with the main Matrix View.

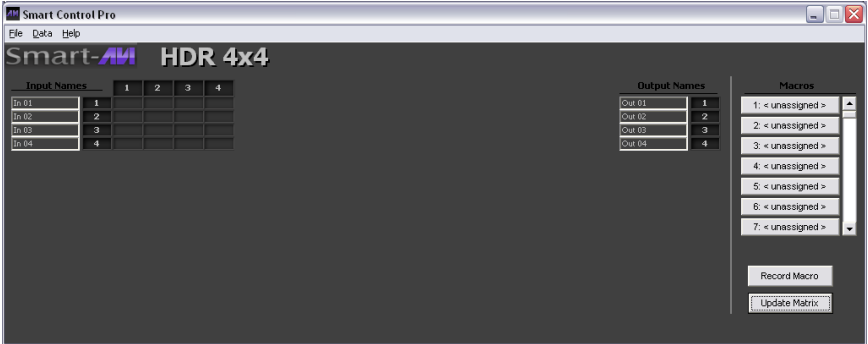
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Main Routing Window

The Main Routing Window enables you to control the router connections by means of the cross-point panel, the button panel, or with the pre-recorded routes called macros.

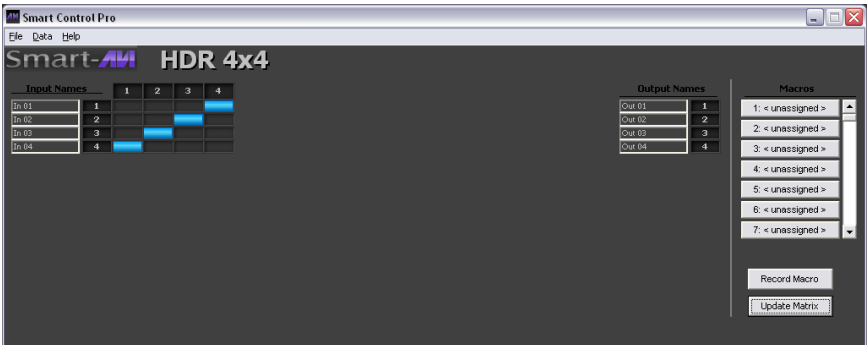
Cross-point Panel: Simply click on the cross point itself. The input on the left will then be routed to the output above.



Note: Inputs can be routed to several different outputs, but each output can only have a single input at any one time. So you can have several connections horizontally but not vertically.

The Button Panel: To broadcast all outputs to an input, hold the CTRL key down and click on an input.

Macros: This section of the window is used to save and play black macros. Macros store a set sequence of routes.



USING RS-232 CONTROL (THIRD-PARTY SOFTWARE)

How to properly create an RS-232 connection between a PC and HDR-4x4-Plus.

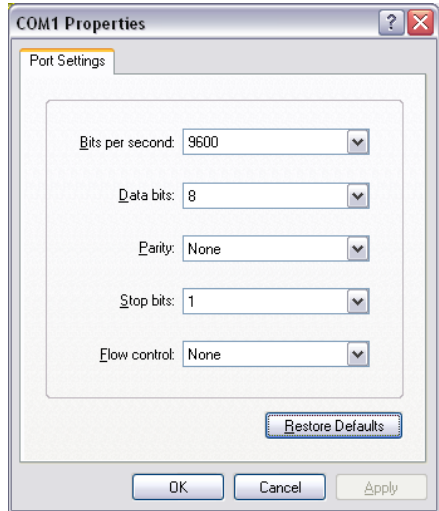
Establish a connection to HDR-4x4-LP:

1. Connect a straight through male-to-female RS-232 cable (not included) to the RS-232 connector on the PC.
2. Connect the other end of the cable to the RS-232 port of the HDR-4x4-Plus
3. Power on the device.

CONNECTOR	PIN	NAME	DESCRIPTION
DB9 MALE - RECEIVE	2	RxD	Receive Data on DB9 Male
	3	TxD	Transmit Data on DB9 Male
	5	SGND	Ground
DB9 FEMALE - TRANSMIT	2	TxD	Transmit Data on DB9 Female
	3	RxD	Receive Data on DB9 Female
	5	SGND	Ground

Setting up the Terminal Application:

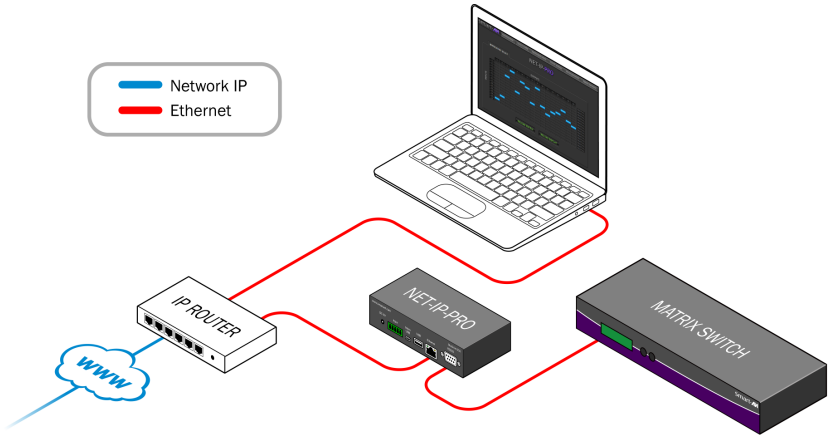
1. Open HyperTerminal on the PC. (or use the terminal client of your choice)
2. Use the default settings to create a connection to the device: **9600, 8, N, 1**. (see settings on right).
3. Be sure that Flow Control is *None*.
4. The output of the device will be the same as the PC.



For more information about the RS-232 Command Protocol, visit www.smartavi.com.

TCP/IP CONTROL (OPTIONAL)

The NET-IP-PRO is an RS-232 control module that allows most SmartAVI switching matrixes to be controlled remotely via HTTP or TELNET. Manage the switching functions of your matrix with ease from anywhere in the world. With NET-IP-PRO you can save input/output configuration presets for easy access. TELNET access provides transparent command control of your matrix, perfect for use with automated third-party control software.



For more information about the NET-IP-PRO, visit www.smartavi.com.

LIMITED WARRANTY STATEMENT

A. *Extent of limited warranty*

1. SmartAVI Technologies, Inc. warrants to the end-user customers that the SmartAVI 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.
2. SmartAVI 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
3. If SmartAVI receives, during applicable warranty period, a notice of defect, SmartAVI will at its discretion replace or repair defective product. If SmartAVI is unable to replace or repair defective product covered by the SmartAVI warranty within reasonable period of time, SmartAVI shall refund the cost of the product.
4. SmartAVI shall have no obligation to repair, replace or refund unit until customer returns defective product to SmartAVI.
5. Any replacement product could be new or like new, provided that it has functionality at least equal to that of the product being replaced.
6. SmartAVI limited warranty is valid in any country where the covered product is distributed by SmartAVI.

B. *Limitations of warranty*

TO THE EXTENT ALLOWED BY LOCAL LAW , NEITHER SMARTAVI NOR ITS THIRD PARTY SUPPLIERS MAKE ANY OTHER WARRANTY OR CONDITION OF ANY KIND WHETHER EXPRESSED OR IMPLIED , WITH RESPECT TO THE SMARTAVI 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 EXTENT ALLOWED BY LOCAL LAW , EXCEPT FOR THE OBLIGATIONS SPECIFICALLY SET FORTH IN THIS WARRANTY STATEMENT , IN NO EVENT WILL SMARTAVI 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.

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SMART AUDIO VIDEO INNOVATION

NOTICE

The information contained in this document is subject to change without notice. SmartAVI makes no warranty of any kind with regard to this material, including but not limited to, implied warranties of merchantability and fitness for particular purpose.

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SmartAVI.com

Many industry-leading companies have recognized the innovation and power of SmartAVI's technologies and have successfully implemented them within their systems. Users of SmartAVI technology include:



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