USERS GUIDE

HPX Series

HPX-TX1 / HPX-TX2 / HPX-RX-SM / HPX-RX-VW

H.264 IP Distribution

HPX-RX-VW

HPX-RX-SM

HPX-TX1

HPX-TX2

Manual Number: 140731

SAFETY INSTRUCTIONS

Please review the following safety precautions. If this is the first time using this model, then read this manual before installing or using the product. If the product is not functioning properly, please contact your local dealer or Aurora for further instructions.

The lightning symbol in the triangle is used to alert you to the presence of dangerous voltage inside the product that may be sufficient to constitute a risk of electric shock to anyone opening the case. It is also used to indicate improper installation or handling of the product that could damage the electrical system in the product or in other equipment attached to the product.

The exclamation point in the triangle is used to alert you to important operating and maintenance instructions. Failure to follow these instructions could result in injury to you or damage to the product.

Be careful with electricity:

- **Power outlet**: To prevent electric shock, be sure the electrical plug used on the product power cord matches the electrical outlet used to supply power to the Aurora product. Use only the power adapter and power connection cables designed for this unit.
- **Power cord**: Be sure the power cord is routed so that it will not be stepped on or pinched by heavy items.
- **Lightning**: For protection from lightning or when the product is left unattended for a long period, disconnect it from the power source.

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Also follow these precautions:

- **Ventilation**: Do not block the ventilation slots if applicable on the product or place any heavy object on top of it.
  Blocking the air flow could cause damage. Arrange components so that air can flow freely. Ensure that there is adequate ventilation if the product is placed in a stand or cabinet. Put the product in a properly ventilated area, away from direct sunlight or any source of heat.
- **Overheating**: Avoid stacking the Aurora product on top of a hot component such as a power amplifier.
- **Risk of Fire**: Do not place unit on top of any easily combustible material, such as carpet or fabric.
- **Proper Connections**: Be sure all cables and equipment are connected to the unit as described in this manual.
- **Object Entry**: To avoid electric shock, never stick anything in the slots on the case or remove the cover.
- **Water Exposure**: To reduce the risk of fire or electric shock, do not expose to rain or moisture.
- **Cleaning**: Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- **ESD**: Handle this unit with proper ESD care. Failure to do so can result in failure.

FCC

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference.
(2) This device must accept any interference received, including interference that may cause undesired operation.

Trademarks

All trademarks in this document are the properties of their respective owners.

TABLE OF CONTENTS

PACKAGE CONTENTS

Please make sure the following items are included within your package. Contact your dealer if any items are missing or damaged.

HPX-TX1

- 1 qty HPX-TX1
- 1 qty 12v DC Power Supply
- 1 qty Power Cable
- 1 qty 3 pos Phoenix Male Connectors
- 2 qty Mounting Ears

HPX-TX2

- 1 qty HPX-TX2
- 1 qty Power Cable
- 1 qty 3 pos Phoenix Male Connectors
- 2 qty Mounting Ears

HPX-RX-VW

- 1 qty HPX-RX-VW
- 1 qty 12v DC Power Supply
- 1 qty Power Cable
- 1 qty 3 pos Phoenix Male Connectors
- 1 qty 5 pos Phoenix Male Connectors
- 2 qty Mounting Ears

HPX-RX-SM

- 1 qty HPX-RX-SM
- 1 qty 12v DC Power Supply
- 1 qty Power Cable
- 1 qty 3 pos Phoenix Male Connectors
- 1 qty 5 pos Phoenix Male Connectors
- 2 qty Mounting Ears

Note: Go to www.auroramm.com for latest manual and firmware

INTRODUCTION

About

HPX-TX1 / TX2

The HPX-TX is a high performance H.264 streaming media encoder for high definition signal delivery over IP networks. The HPX-TX can be used with decoders HPX-RX-VW and HPX-RX-SM to provide complete end-to-end streaming media system. It features one HDMI input (TX2 has two HDMI input), one HDMI loop-through, one VGA input, one VGA loop-through (TX2), and one VIDEO (TX2). The HPX-TX adopts standard H.264/MPEG-4 AVC encoding and outputs two IP streams, a 1080p@60 stream and a 480p@60 stream. It can outputs resolutions from 480p to 1920x1200 scaled based on the sink EDID. High performance signal processing scales and optimizes video input signals to obtain the intended viewing effects. Encoding controls can also adjust bit rate and quality. The HPX-TX1/TX2 expands an AV systems capability by extending HDMI signals over IP networks for bandwidth optimized applications. To simplify operation, computer control software and/or the HJ-PXC IP control unit is available for complete management of the system.

HPX-RX-VW

HPX-RX-VW is a high performance H.264 decoder used with HPX-TX encoder(s) to provide complete end-to-end streaming-media transmission system. The HPX-RX-VW supports video wall functionality and can stream resolutions and refresh rates up to 1080p@60. The output resolutions range from 480p to 1920x1200 scaled based on the sink EDID. To simplify operation, computer control software and/or the HJ-PXC IP control unit is available for complete management of the system.

HPX-RX-SM

HPX-RX-SM is a high performance H.264 decoder used with HPX-TX encoder(s) to provide complete end-to-end streaming-media transmission system. The HPX-RX-SM can decode and display up to 16 IP streams and display on a single display up to 1080p@60. The output resolutions range from 480p to 1920x1200 scaled based on the sink EDID. To simplify operation, computer control software and/or the HJ-PXC IP control unit is available for complete management of the system.

Features

HPX-TX1

- Streams HDMI & VGA signals over IP networks
- Supports H.264/MPEG-4 AVC compression standard.
- Use with H.264 decoder HPX-RX-VW to provide features, such as extending HDMI signals over IP networks and matrix switching control over LAN by the control software and Videowall effects.
- Use with H.264 decoder HPX-RX-SM to provide multi-picture viewing effects (up to 16 pictures) in a single screen.
- Supports the input resolutions, 480i, 480p, 576i, 576p, 720p, 1080i, 1080p.
- Supports output resolutions from 480p to 1920x1200 scaled based on the sink EDID.
- Scales and optimizes video input signals for the intended viewing effects.
- Auto input format detection to provide the appropriate decoding and signal processing.
- Encoding bit rate is selectable from 1K~40Mbps.
- Supports TCP/IP, Telnet, UDP, IGMP and H.264
- Supports AutoIP configuration.
- Automatically detected by the control software.
- Optional IP control box (HJ-PXC) to allow matrix control and management via LAN for control systems.

HPX-TX2

- Streams HDMI, VGA, & Composite Video signals over IP networks.
- Supports H.264/MPEG-4 AVC compression standard.
- Use with H.264 decoder HPX-RX-VW to provide features, such as extending HDMI signals over IP networks and matrix switching control over LAN by the control software and Videowall effects.
- Use with H.264 decoder HPX-RX-SM to provide multi-picture viewing effects (up to 16 pictures) in a single screen.
- Supports the input resolutions, 480i, 480p, 576i, 576p, 720p, 1080i, 1080p.
- Supports output resolutions from 480p to 1920x1200 scaled based on the sink EDID.
- Scales and optimizes video input signals for the intended viewing effects.
- Auto input format detection to provide the appropriate decoding and signal processing.
- Encoding bit rate is selectable from 1K~40Mbps.
- Supports TCP/IP, Telnet, UDP, IGMP and H.264
- Supports AutoIP configuration.
- Automatically detected by the control software.
- Optional IP control box (HJ-PXC) to allow matrix control and management via LAN for control systems.

HPX-RX-VW

- Supports live IP video stream decoding.
- Uses with encoder(s) HPX-TX1 / TX2 to provide a complete end-to-end stream transmission system, supporting seamless switching.
- Supports streaming resolutions and refresh rates up to 1080p@60.
- Supports output resolutions from 480p up to 1920x1200 based on the sink EDID.
- Supports video wall functionality.
- RS232 for debug or to control a RS232 device.
- Automatic aspect ratio filling, following and fitting management.
- Support TCP/IP, Telnet, UDP, IGMP and H.264
- Supports PoE (Power over Ethernet)
- Supports AutoIP configuration.
- Automatically detected by control software.
- Optional IP control box (HJ-PXC) to allow matrix control and management via LAN for control systems.

HPX-RX-SM

- Supports live IP video stream decoding
- Uses with encoder(s) HPX-TX1 / TX2 to provide a complete end-to-end stream transmission system, supporting seamless switching.
- Supports streaming resolutions and refresh rates up to 1080p@60.
- Supports output resolutions from 480p up to 1920x1200 based on the sink EDID.
- Supports multi-picture viewing effects in a single screen by automatically dividing the screen into 1, 4, 9 or 16 complete pictures based on the number of IP streams.
- RS232 for debug or to control a RS232 device.
- Automatic aspect ratio filling, following and fitting management.
- Support TCP/IP, Telnet, UDP, IGMP and H.264
- Supports PoE (Power over Ethernet)
- Supports AutoIP configuration.
- Automatically detected by control software.
- Optional IP control box (HJ-PXC) to allow matrix control and management via LAN for control systems.

HPX-TX1 Front & Rear

Front

- Power LED – LED will light RED when power is applied.

Rear

- DC 12V – Connection to 12v / 2A power supply
- LAN – 10/100Mbps
- HDMI In – HDMI input signal to be encoded and transmitted.
- HDMI Out – HDMI Local Loop Out
- RS-232 – Serial port control

HPX-TX2 Front & Rear

Front

- Power LED – LED will light RED when power is applied.

Rear

- DC 12V – Connection to 12v / 2A power supply
- LAN – 10/100Mbps
- HDMI IN1 – HDMI input 1 signal to be encoded and transmitted.
- HDMI IN2 – HDMI input 1 signal to be encoded and transmitted.
- HDMI Out – HDMI Local Loop Out
- VGA Out – VGA Local Loop Out
- RS-232 – Serial port control

HPX-RX-VW Front & Rear

Front

- Power LED – LED will light RED when power is applied.

Rear

- GND Symbol – Ground connection
- DC 12V – Connection to 12v / 2A power supply
- LAN – 10/100Mbps
- Audio Out –Audio de-embedded output
- HDMI Out – HDMI Output to Display
- RS-232 – Serial port control
- IR TX – IR Emitter
- I/O IN – Digital Input

HPX-RX-SM Front & Rear

Front

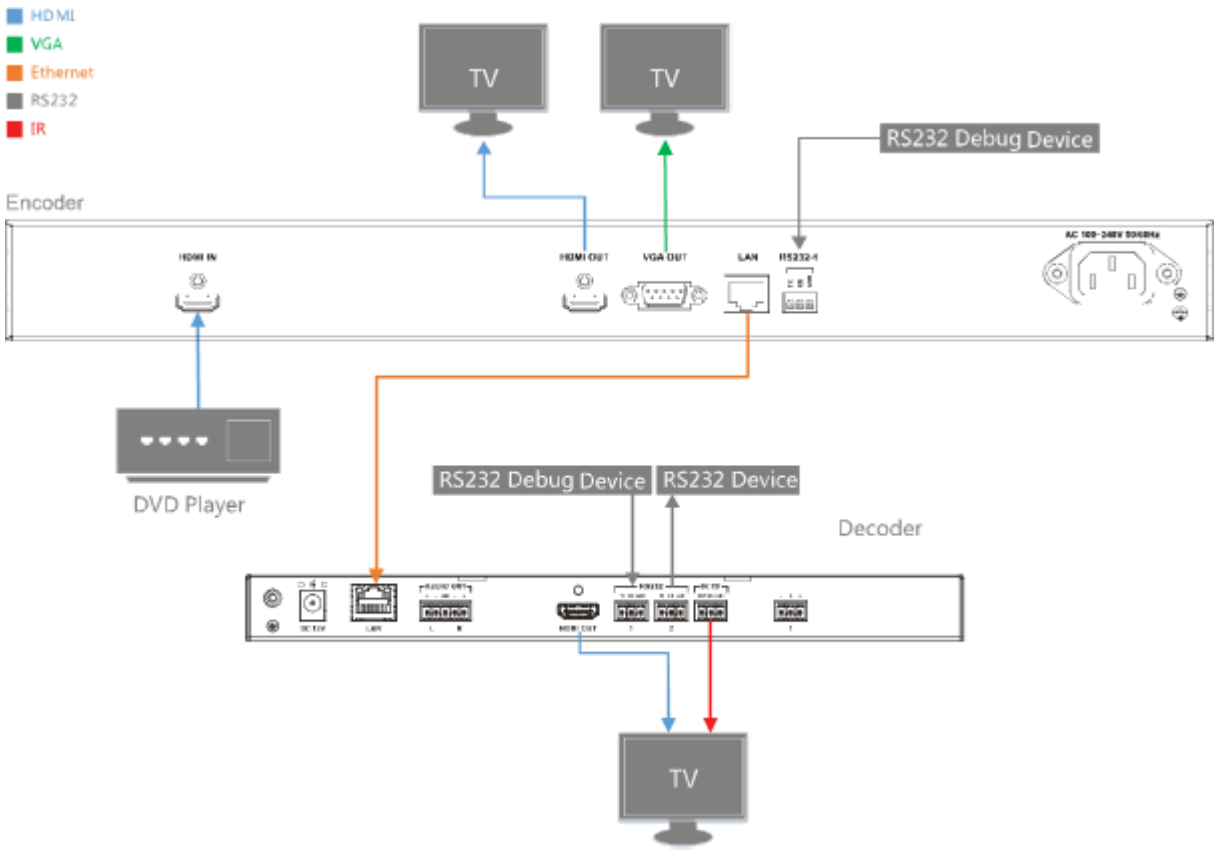
- Power LED – LED will light RED when power is applied.

Rear

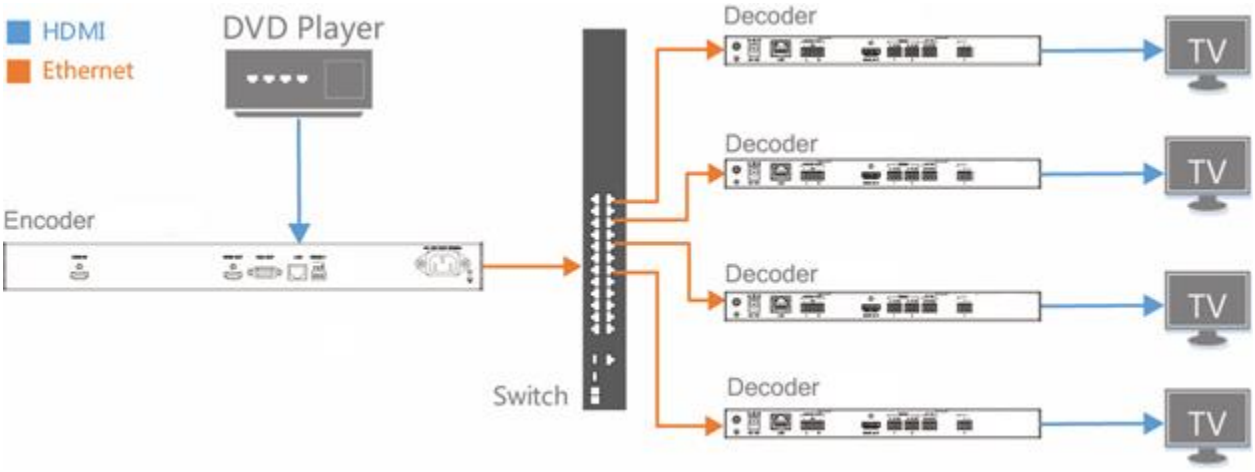
- GND Symbol – Ground connection
- DC 12V – Connection to 12v / 2A power supply
- LAN – 10/100Mbps
- Audio Out –Audio de-embedded output
- HDMI Out – HDMI Output to Display
- RS-232 – Serial port control
- IR TX – IR Emitter
- I/O IN – Digital Input

APPLICATIONS

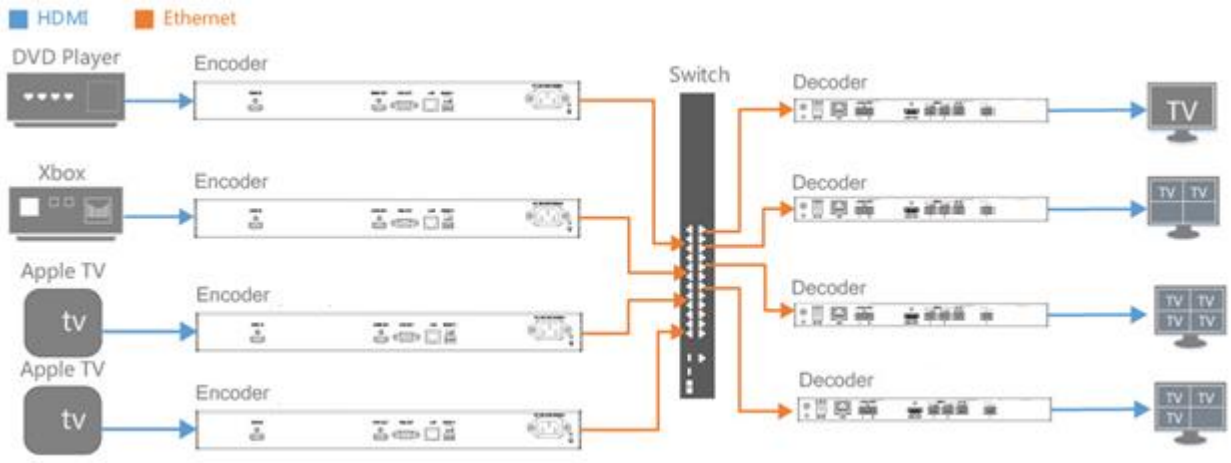
Example 1 HPX-TX1 Transmitter to HPX-RX-SM / VW Receiver



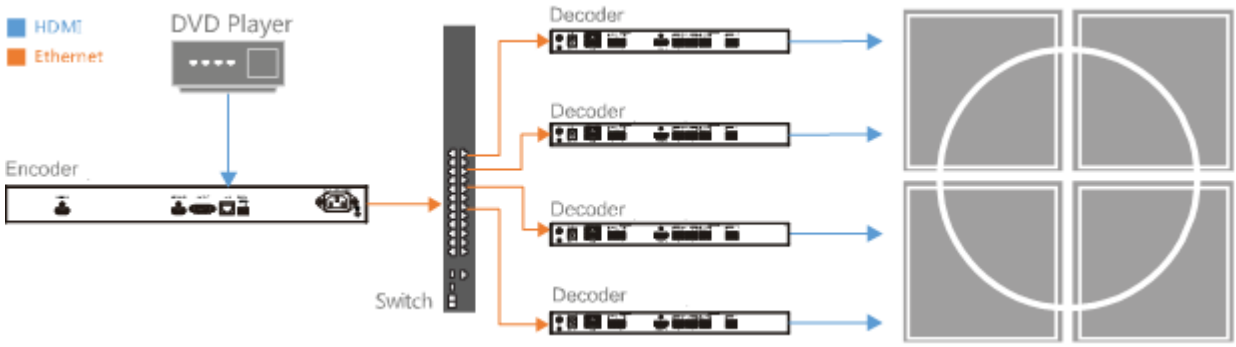
Example 2 HPX-TX1 Transmitter to Multiple HPX-RX-SM / VW Receivers



Example 3 Multiple HPX-TX1 to Multiple HPX-RX-SM / VW



Example 4 Video Wall HPX-RX-VW



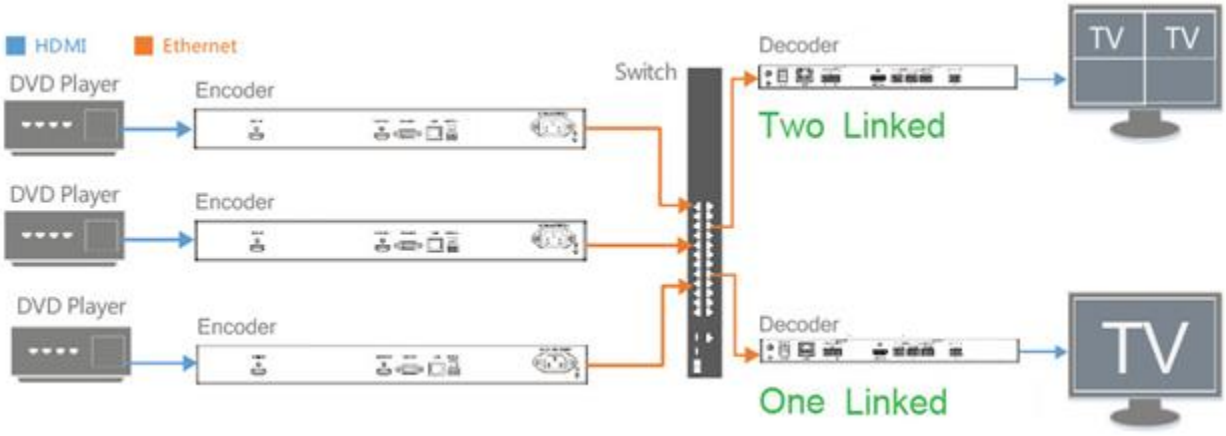
Based on the number of IP streams from the sources, a single screen can be divided into 1, 4, 9 or 16 parts with each part displays a complete picture.

For details, see the following table.

Decoder	Number of HPX-RX-VW linked	Viewing effects on the screen
HPX-RX-VW	1	1 complete picture filling the entire screen.
	2-4	4 complete pictures filling the entire screen
	5-9	9 complete pictures filling the entire screen.
	10-16	16 complete pictures filling the entire screen.

Note:

When the number of HPX-RX-SM linked to HPX-TX1/TX2 is from 2-3, 5-8, or 10-15, the unoccupied parts of the screen show no picture. For example, HPX-TX1 below is linked to one or two HPX-RX-SM, the displays connected to HPX-RX-SM show one or two complete pictures.

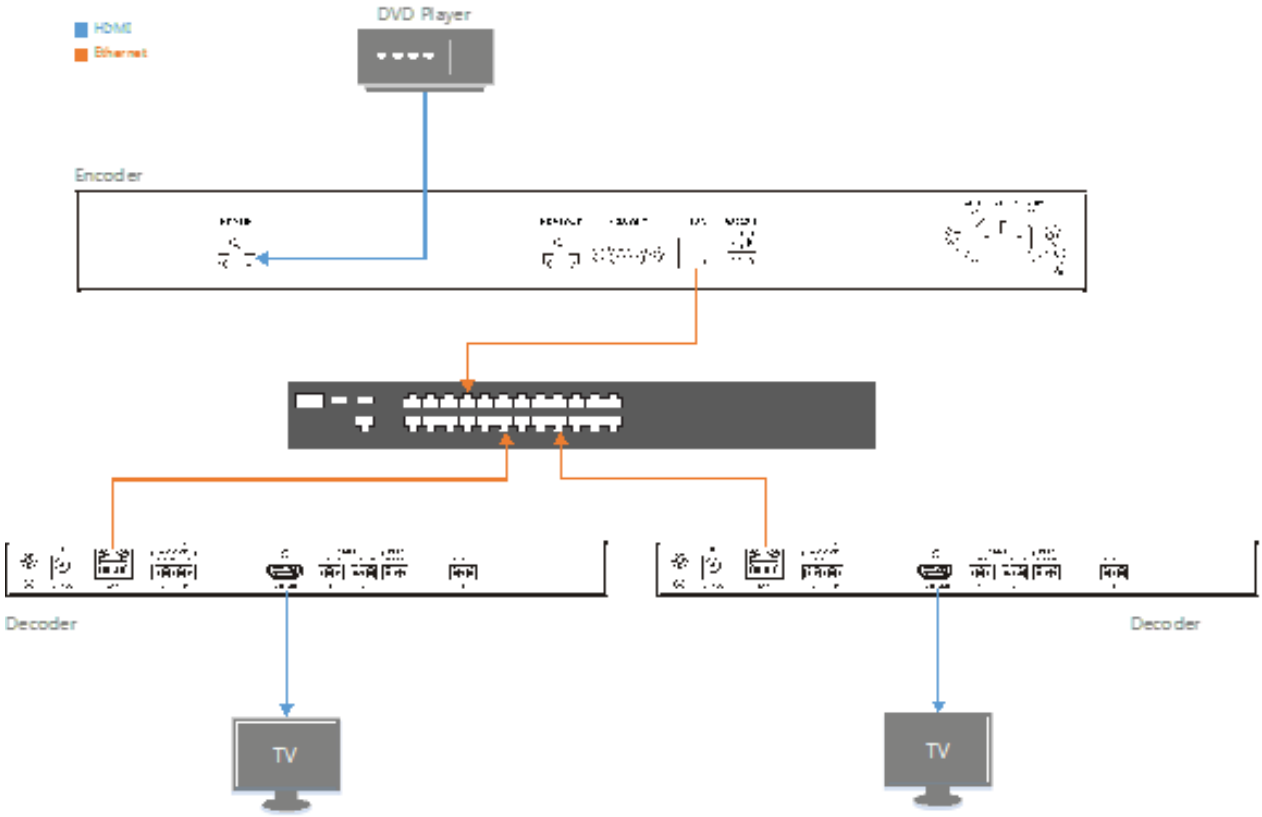


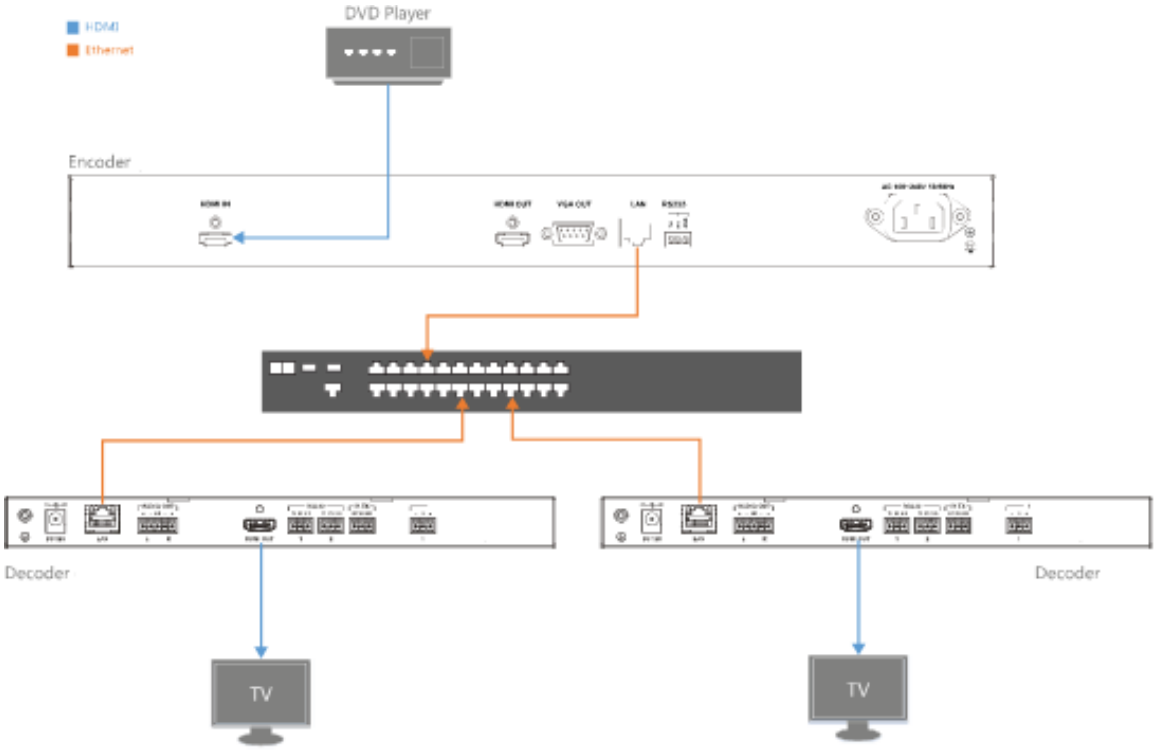
HARDWARE INSTALLATION

1. Connect a HDMI source to the HPX-TX1 / TX2 via a HDMI cable.
2. Connect a HDMI sink to the HPX-RX-SM via a HDMI cable.
3. Connect a HDMI sink to the HPX-RX-VW via a HDMI cable.
4. Connect a computer, HPX-TX1 / TX2, HPX-RX-SM, & HPX-RX-VW to a 10/100Base-T Ethernet switch via CAT5e/6 cables.
5. Connect the devices to the power supplies and start the operations.

Note:

If the switch doesn't support PoE function or is unable to provide enough power, connect HPX devices to the power supplies with their power adapters.




HDMI
Ethernet
DVD Player
Encoder
Decoder
Decoder
TV
TV

OPERATION

PC Control Tool

Installation

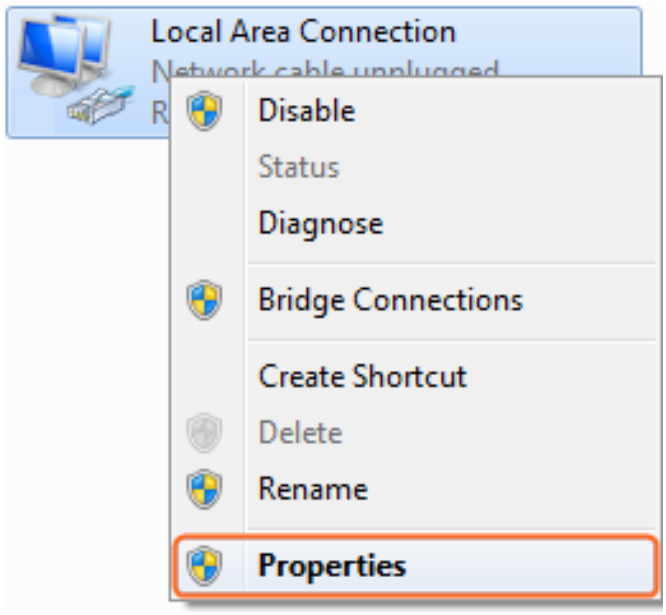
1. Obtain the installation package of the HDMI over IP configuration tool **HJ Control V2.4.14.zip.** Double-click **HJ Control.exe** to start the tool.

Note: The Operation System must be Windows XP or a later version.

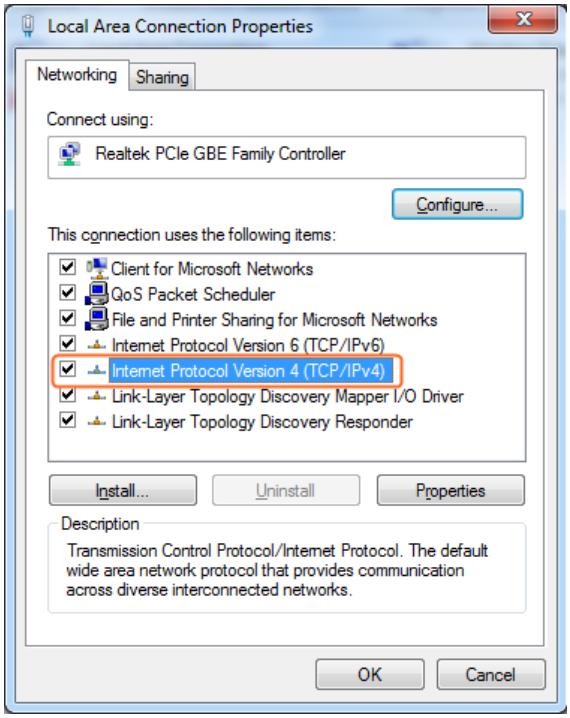
You can control the device through the web management page of IP control box as well. For details, please refer to the User Manual of IP control box

2. Set a static IP on the computer, here take Window 7 as an example.

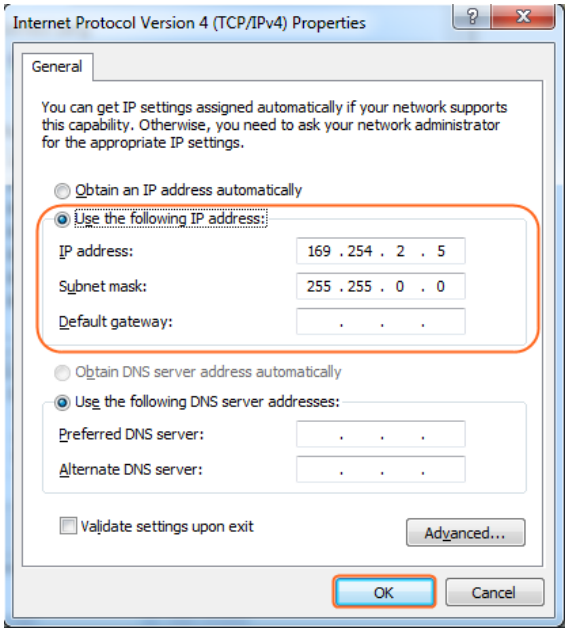
Step 1. Click **Start** menu, go to **Control Panel** > **Network and Sharing center** > **Change Adapter Settings** > **Local Area Connection**, right click it, choose **Properties**.



Step 2. Highlight **Internet Protocol Version 4 (TCP/IPv4)**, click **Properties**.



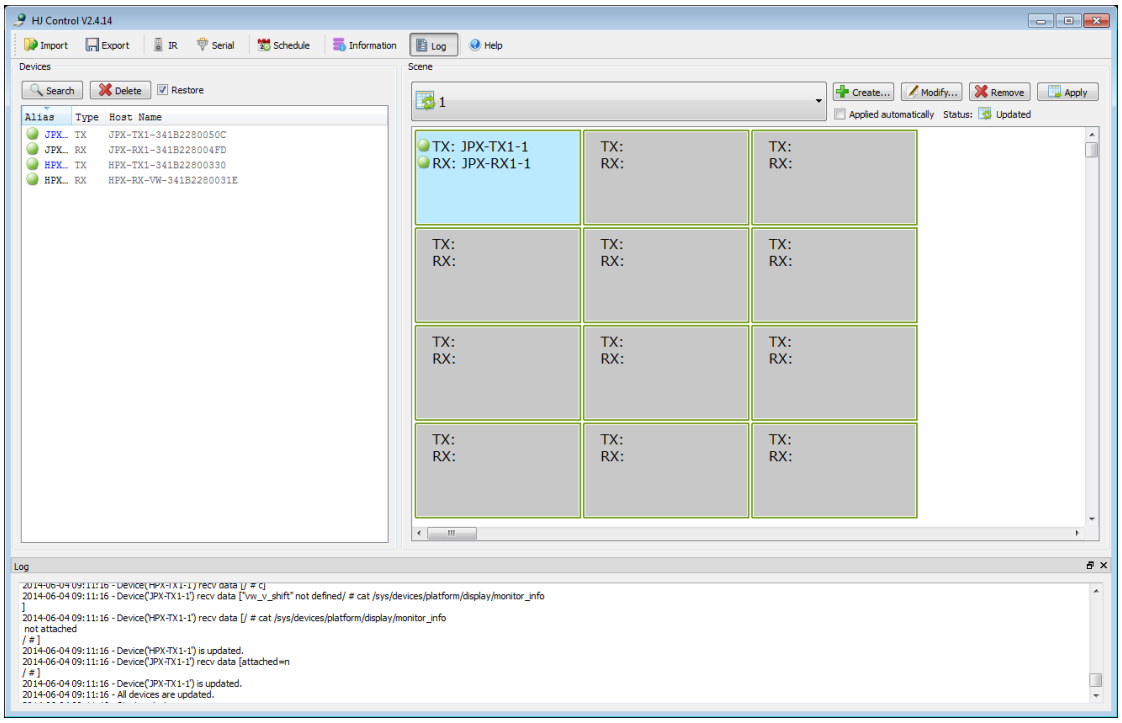
Step 3. Check **Use the following IP address**, the **IP address** enter 169.254.x.x (here take 169.254.2.5 as an example), the **subnet mask** enter 255.255.0.0. Click **OK**, then click **OK** again.



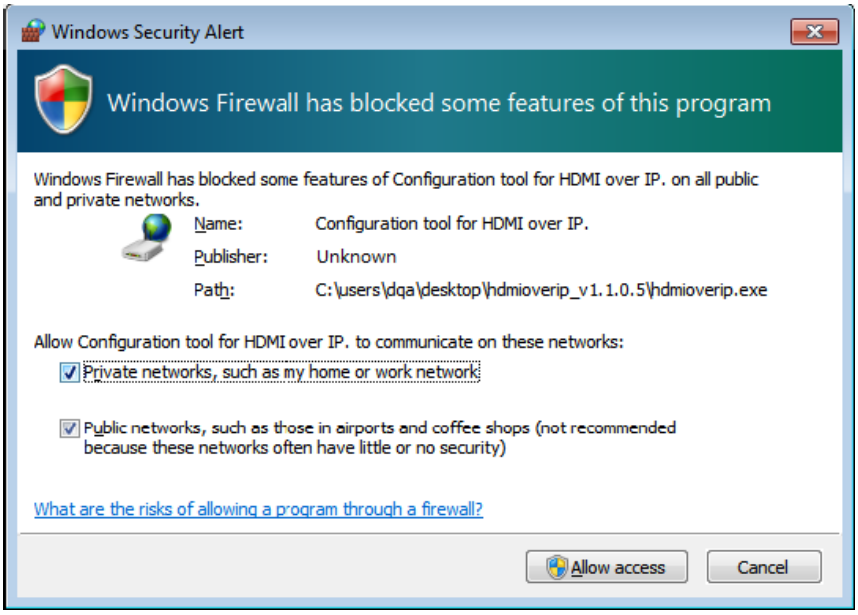
Control Software Instructions

Searching Devices

Click **Search** in the Device list area. The search is started. When completed it will list the devices found on the network and the "Restore" (previous scene) will be checked by default.



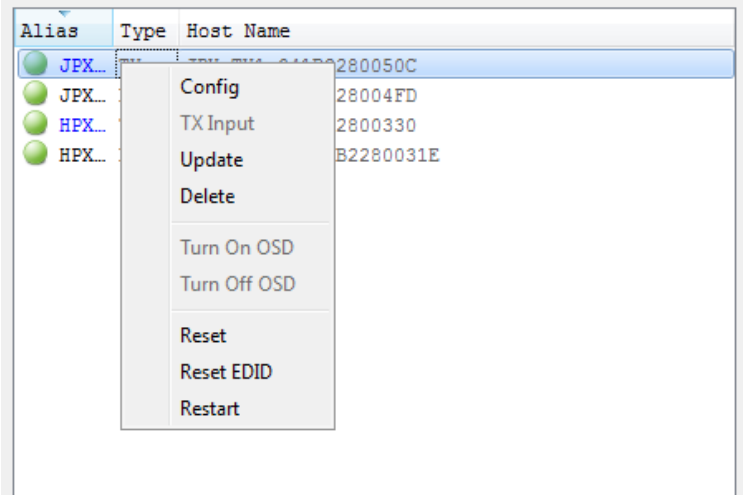
Note: If the Windows Security Alert dialog box comes up, check both boxes and click Allow access (with Administration Authority)



If no device is found, please refer to problem 1 in Error! Reference source not found..

Setting Device Parameters

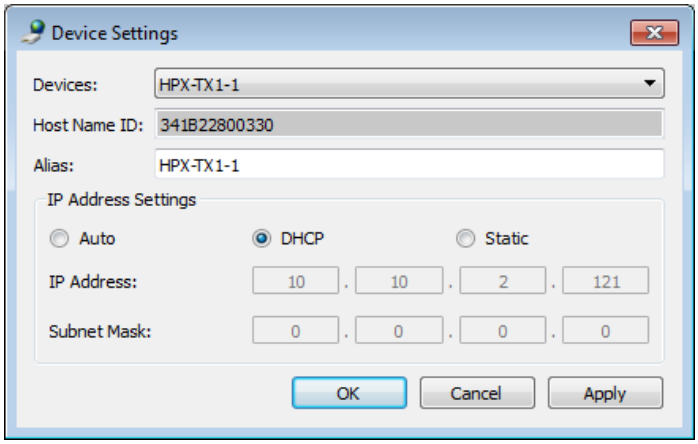
Right click a device in **Devices**, all the authorized operations are displayed in the shortcut menu.



Item	Description
Config	Configure the device parameters, such as device name, alias, IP address settings (Auto, DHCP, Static).
TX input	Not supported.
Update	Update a single or more device status, such as alias, type or hostname.
Delete	Delete a single or more devices that have been searched and listed below in the **Devices** list. To display the devices that you have deleted, click **Search**.
Turn On OSD	Not supported.
Turn Off OSD	Not supported.
Reset	Restore a single or more devices to their factory settings. This operation may take a few seconds. When reset is completed, the devices will become active again. It's recommended that you click **Delete** to remove the original devices and click **Search** to display them again.
Reset EDID	Not supported.
Restart	Restart a single or more devices that have been searched and listed below in the **Devices** list. This operation may take a few seconds. When restart is completed, the devices will become active again.

Device Settings

In the **Devices** list, right-click on any device, and then choose **Config** to display **Device Settings** window. Or you can also double-click on any device to display this window.



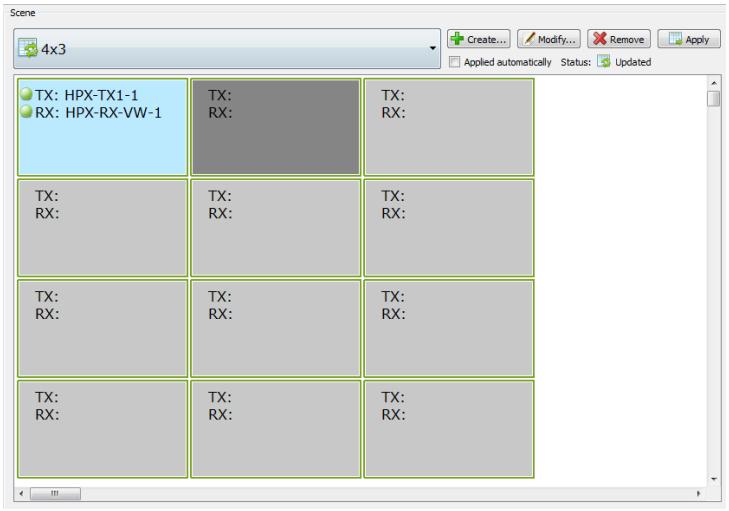
GUI Element	Attribute	Description
Devices	Device parameters	Indicates the current device on which you perform operations.
Host Name ID		Indicates the host name ID, which is generated by the system and cannot be changed.
Alias		Indicates the user-defined device name that contains a maximum of 80 characters.
Auto	IP distribution modes	Indicates a mode in which the device is assigned an IP address automatically.
DHCP		Indicates a mode in which the device is assigned an IP address by using a router or switch with a DHCP server.
Static		Indicates a mode in which the device is assigned an IP address manually. In this case, enter an IP address (169.254.x.x) in **IP Address** and 255.255.0.0 in **Subnet Mask**.
IP Address	Network parameters	Indicates the device IP address, which can be set only when the static mode is selected.
Subnet Mask		Indicates the device subnet mask, which can be set only when the static mode is selected.
OK	Buttons	Saves current settings, applies them to the device, and closes this dialog box.
Cancel		Cancels current settings and closes this dialog box.
Apply		Saves current settings and applies them to the device without closing this dialog box.

Note:

If any changes are made to the IP distribution modes, for example it is changed from Static to Auto or DHCP, restart the device and search it again in the control software.

Matrix Setting Introduction

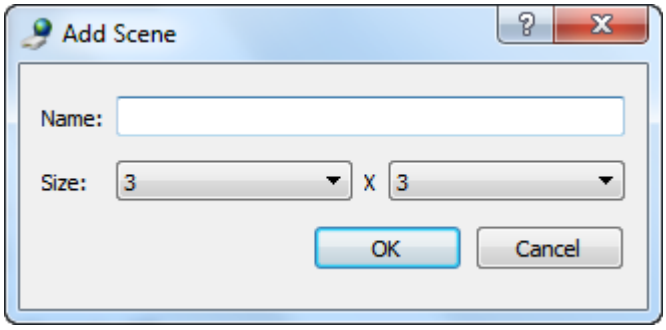
On the home screen of the control software, the **Scene** area displays the status of all TX and RX connections.



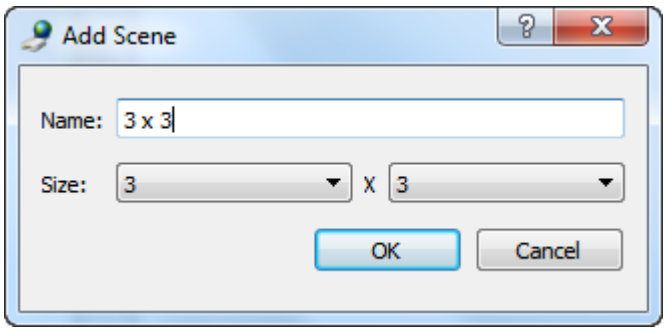
GUI Element	Attribute	Description
Create	Buttons	Creates a new configuration scene.
Modify		Modifies the current configuration scene.
Remove		Deletes the current configuration scene.
Apply		Applies the configuration connection settings to the connected devices.
Applied automatically	Option	Indicates that settings are applied immediately after you configure the intersection between TX and RX.
Status	Icons	Indicates that the matrix created by devices is restored. Indicates that matrix settings are in progress. Indicates that matrix settings are applied successfully. Indicates that matrix settings fail to be applied.

Creating the Scene Window

6. Click **Create** in the **Scene** area, the **Add Scene** dialog box is displayed.



7. Change the configuration layout, for example set **Name** to 3 x 3 and **Size** to 3 x 3.



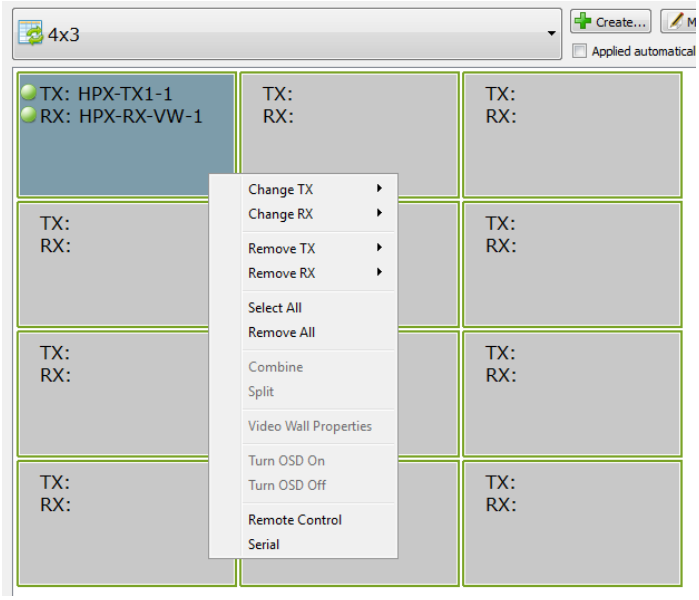
8. Click **OK**.

Note:

To modify the current configuration layout, click Modify on the tool bar.

Scene Area Window Instruction

You can right click a cell in the Scene area to perform the operations from the shortcut menu.



GUI Element	Description
Change TX	Selects TX from the searched devices.
Change RX	Selects RX from the searched devices.
Remove TX	Deletes the TX from the searched devices.
Remove RX	Deletes the RX from the search devices.
Select All	Selects all the cells in the **Scene** area.
Remove All	Remove all the devices in the **Scene** area.
Combine	Not supported.
Split	Not supported.

GUI Element	Description
Video Wall Properties	Not supported.
Turn OSD On	Not supported.
Turn OSD Off	Not supported.
Remote control	IR remote to send IR commands to control the source or device from your computer.
Serial	Sends commands to a RS232 device connected to HPX-TX1/TX2 or HPX-RX-VW/SM for device configuration and control.

Note:

You can also click and drag the desired TX and RX from the Devices list to cells in the Scene area and apply the configuration connection settings.

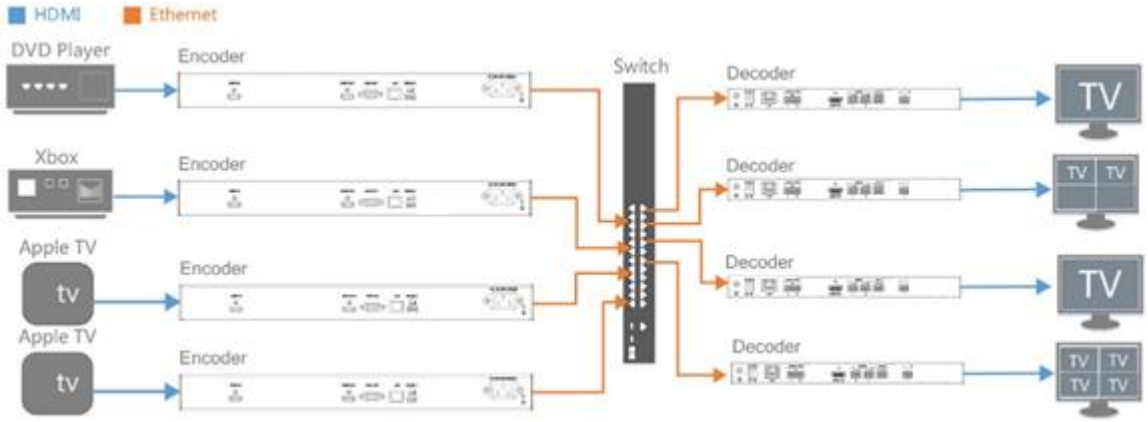
Setting a Matrix

You can set a matrix through the control software to control and manage all the connected devices in a network. This section takes a 2 x 2 matrix as an example.

Preparations:

- Four encoder HPX-TX1/TX2s
- Two decoder HPX-RX-VWs
- Two decoder HPX-RX-SMs
- One 10/100Base-T Ethernet switch.
- Four HDMI source devices
- Four display devices
- A computer
- Eight HDMI cables and eight CAT5e/6 cables

Hardware Connection:



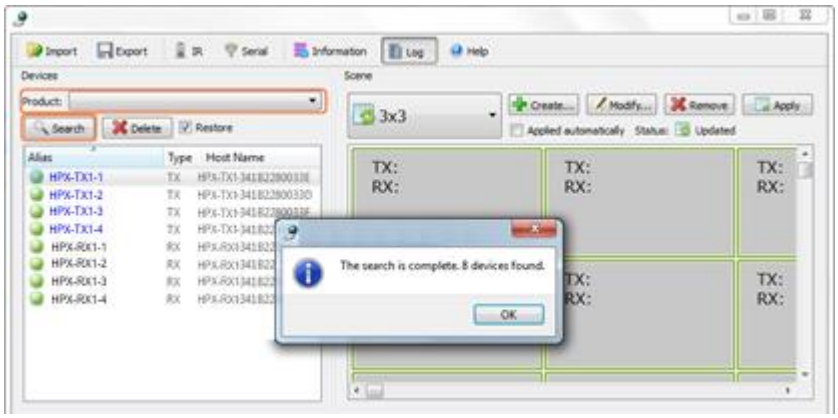
9. Connect one DVD player, one Xbox, two Apple TVs to four HPX-TX1/TX2 via four HDMI cables.
10. Connect the HPX-TX/TX2s to the 10/100Base-T Ethernet switch with four CAT5e/6 cables.
11. Connect four TVs to two HPX-RX-VWs and two HPX-RX-SMs via four HDMI cables.
12. Connect the HPX-RX-VWs and HPX-RX-SMs to the switch with four CAT5/6 cables.
13. Connect your computer to the switch with a CAT5e/6 cable.
14. Power on all the devices.

Note:

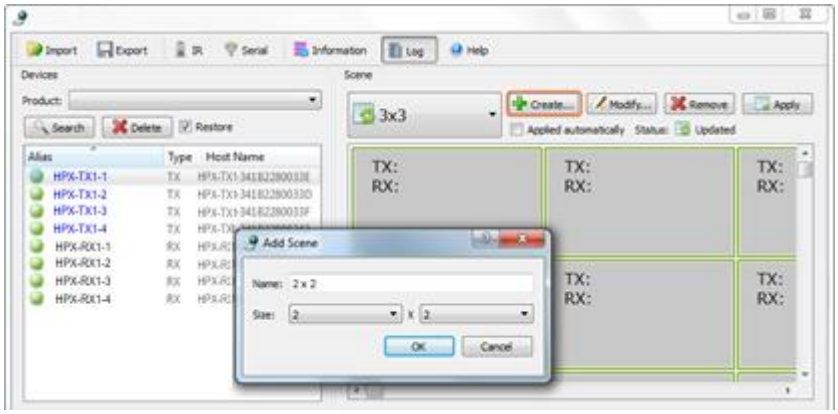
If the switch doesn't support PoE function, connect the HPX-RX-VWs and HPX-RX-SMs to the power supplies.

Operation:

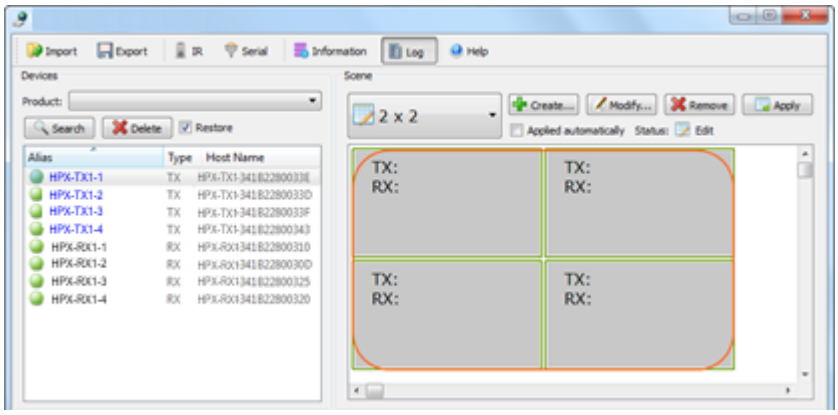
15. Double-click **HJ Control.exe** to launch the control software; Select HPX-TX1/TX2 or HPX-RX-VW/SM from **Product** list; Click **Search** as shown below to start searching TX/RX, and eight devices are found.



16. Click **Create** to create a 2 x 2 configuration scene.

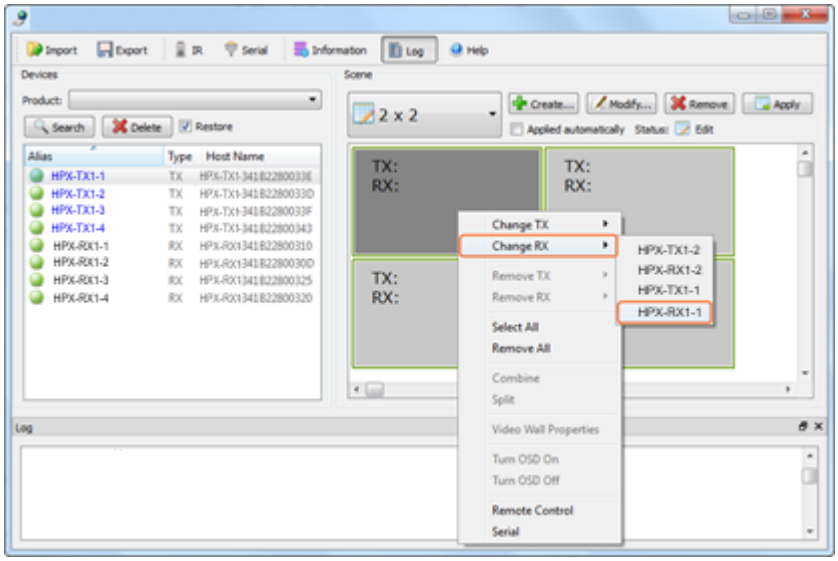


17. Click **OK**, 2 x 2 configuration scene is created as shown below.

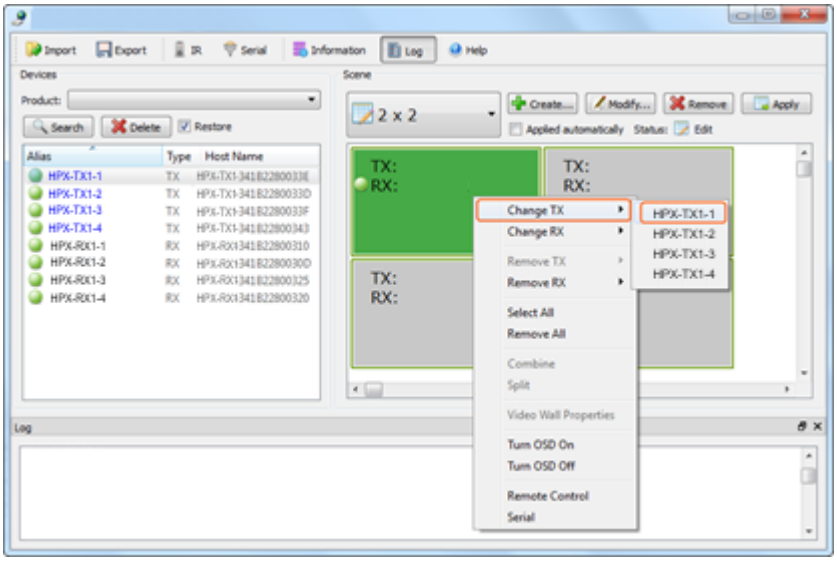


18. Configure the intersection between TX and RX in different cells in the **Scene** area.

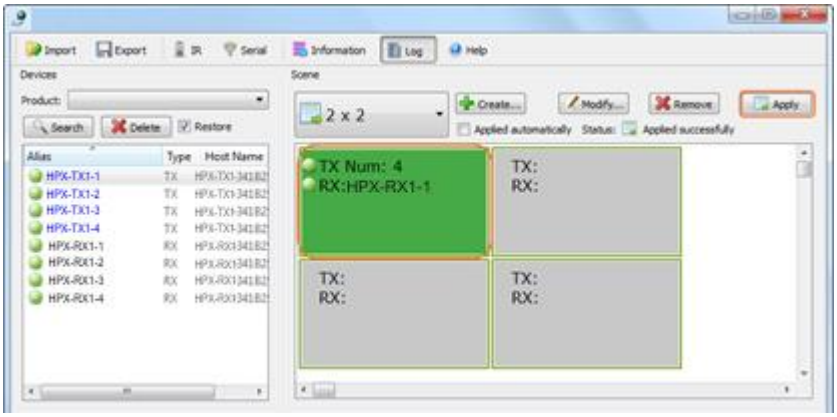
1) Right click the first cell, choose **Change RX** and then **HPX-RX1-1**.



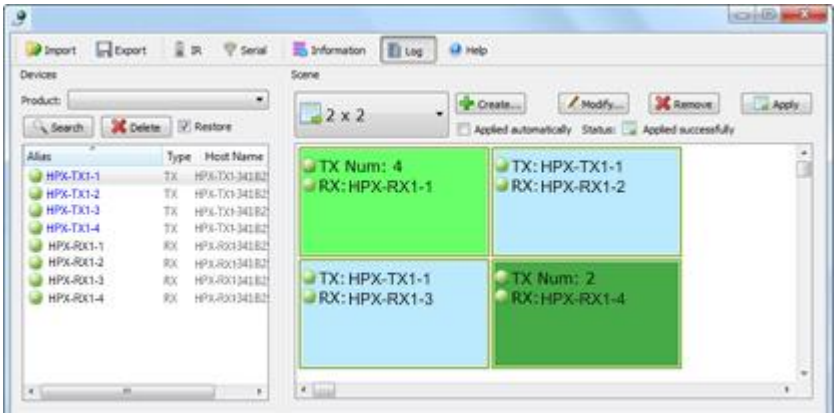
2) Right click the first cell, choose **Change TX** and then **HPX-TX1**.



3) Repeat the above steps to select HPX-TX2 or HPX-RX-VW/SM to configure the intersection between TX and RX in the first cell. And click **Apply** to make the changes to TX and RX take effective.



4) Configure the intersection between TX and RX in other cells in the same way as above. The final scene is created as below.



Then you can see the displays connected to HPX-RX-VWs show a complete picture filling the screen, the displays

connected to HPX-RX-SMs show multiple complete pictures with the unoccupied parts shows nothing.

Note:

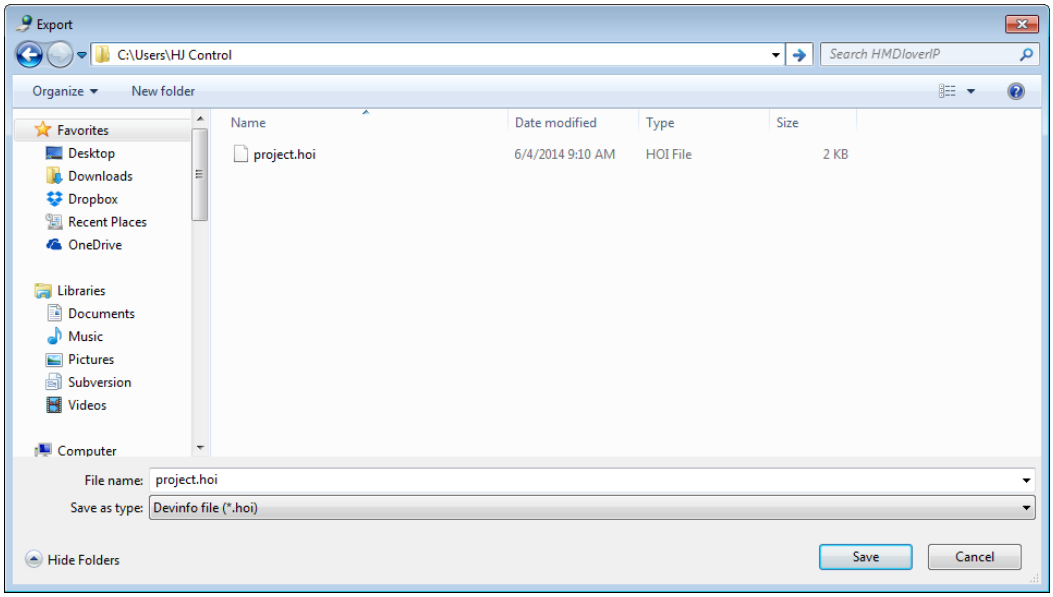
- If HPX-RX-SM is linked to a single HPX-TX1/TX2, the display will show a complete picture filling the screen as that connected to HPX-RX-VW.
- After 2 x 2 matrix is created, you can change TX and RX using the control software to enjoy different viewing effects.

Configuration Files Management

When the control software is closed, the Windows operating system would save the configuration file **project.hoi** to the working directory of current user.

Viewing the Default Configuration File Directory

You can view the default directory from the **Import** dialog box displayed by clicking **Import** on the tool bar.



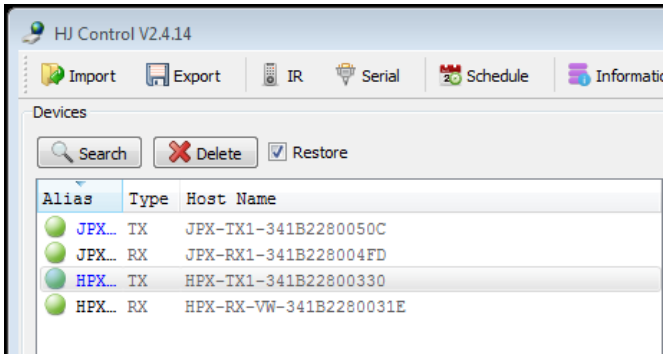
When running the control software next time, it would automatically read the configuration file **default.hoi**. Do not modify or delete the **default.hoi**.

Otherwise, errors may be encountered during program running.

Export or Import the Configuration File

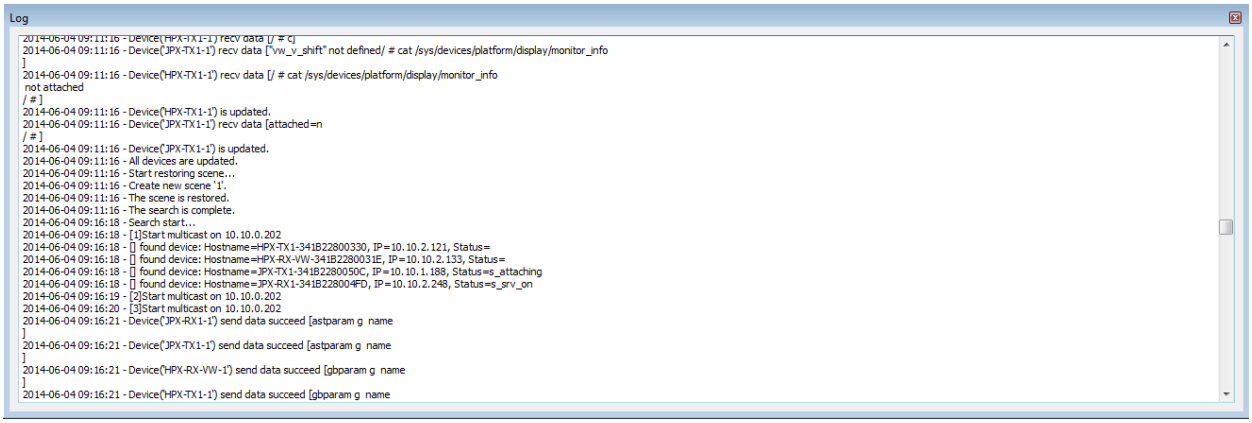
On the home screen of the control software, you can:

- Click **Export** on the tool bar to save the current devices and scene configuration file to a specified directory.
- Click **Import** on the tool bar to import the saved configuration file from this directory.



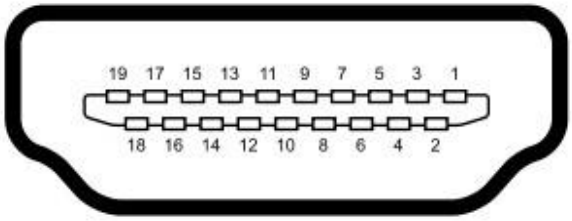
Logs

The logs have recorded the software operation and device communication information, which can be used for troubleshooting.



CONNECTOR PIN DEFINITION

HDMI

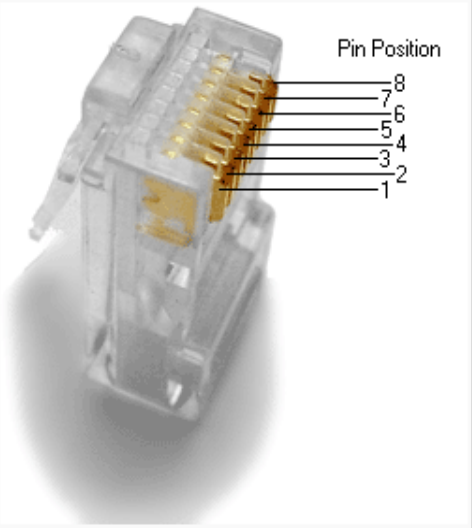


Type A (Receptacle) HDMI

Pin 1	TMDS Data2+	Pin 8	TMDS Data0 Shield	Pin 15	SCL
Pin 2	TMDS Data2 Shield	Pin 9	TMDS Data0–	Pin 16	SDA
Pin 3	TMDS Data2–	Pin 10	TMDS Clock+	Pin 17	DDC/CEC Ground
Pin 4	TMDS Data1+	Pin 11	TMDS Clock Shield	Pin 18	+5 V Power
Pin 5	TMDS Data1 Shield	Pin 12	TMDS Clock–	Pin 19	Hot Plug Detect
Pin 6	TMDS Data1–	Pin 13	CEC		
Pin 7	TMDS Data0+	Pin 14	Reserved (N.C. on device)		

CAT5e/6/6A

T568A and T568B Wiring

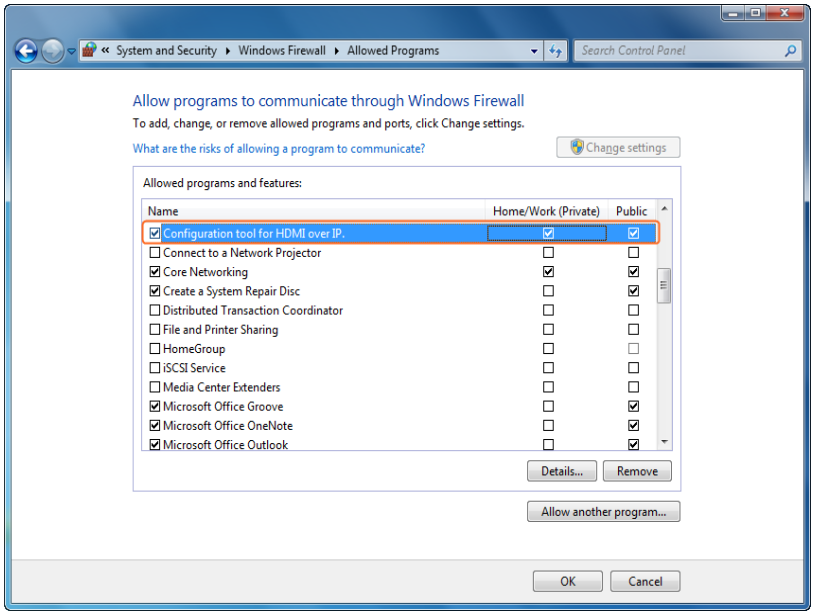
Pin	T568A Pair	T568B Pair	Wire	T568A Color	T568B Color	Pins on plug face (socket is reversed)
1	3	2	tip	white/green stripe	white/orange stripe	
2	3	2	ring	green solid	orange solid	
3	2	3	tip	white/orange stripe	white/green stripe	
4	1	1	ring	blue solid	blue solid	
5	1	1	tip	white/blue stripe	white/blue stripe	
6	2	3	ring	orange solid	green solid	
7	4	4	tip	white/brown stripe	white/brown stripe	
8	4	4	ring	brown solid	brown solid	

1. All transmission distances are measured using Belden 1583A CAT5e 125MHz Solid UTP cable. The transmission distance is defined as the distance between the video source and the display.
2. To reduce the interference among the unshielded twisted pairs of wires in UTP cable, you can use shielded STP cables to improve EMI problems, which is worsen in long transmission.

APPENDIX 1 Troubleshooting

Why HDMI over IP console cannot find any devices?

1) Check Windows Firewall. Take Windows 7 as an example: Click **Start** menu, go to **Control Panel** > **System and Security** > **Windows Firewall** > **Allowed Programs**, highlight **Configuration tool for HDMI over IP**, check **Home/Work (Private)** and **Public**.



2) Check the IP address and subnet mask of the PC. The network segment for IP address is 169.254.*x.x* and the subnet mask is 255.255.0.0, the PC and Transmitter/Receiver should be in the same network segment. For details, please refer to **PC control tool** in chapter **Operation**.
3) Check the IGMP Snooping status in Switch. This function should be enabled.

Why display shows no picture with RX connected?

Check the following items:

- All devices are powered on.
- A picture is achieved when connecting the source directly to the TV.
- TV has switched to the right signal source input mode using your TV remote, such as switching to HDMI 1 if HDMI 1 interface is connected to the RX via a HDMI cable.
- All the cables are qualified.
- The Switch supports IGMP snooping and this function is enabled.

APPENDIX 2 Firmware Update

For the latest firmware updates please go www.auroramm.com

You must be signed up to the Customer Portal in order to download firmware with instructions on how to update.

APPENDIX 3 Technical Specifications

Model Name	HPX-TX1
Technical	**HPX-TX1**
Data Rate	1K – 40Mbps Configurable
Distance	330ft / 100m Max
I/O Connections	**Transmitter** 1 x RJ45 port, 1 x HDMI IN, 1 x VGA IN, 1 x HDMI OUT, 1 x RS232 (3.5 mm phoenix)
Input Video Signal	1.2 volts p-p
Input DDC Signal	5 volts p-p (TTL)
Supported Video Formats	1080P / 1080i / 720P / 576P / 480P/ 576i / 480i
Output Video	HDMI
Latency	120ms – 150ms
Mechanical	**HPX Series**
Housing	Black Painted Steel
Dimensions [L x W x H]	9.96" x 6.11" x .984 (253mm X 155.2mm X 25mm)
Weight	4lbs (1.81kg)
Mounting	Ear Tabs
Power supply	12V DC
Power consumption	6.3W
Operation temperature	0~35°C [32~95°F]
Storage temperature	-20~70°C [-4~140°F]
Relative humidity	10~90% RH [no condensation]

Specifications subject to change without notice.

Model Name	HPX-TX2
Technical	**HPX-TX2**
Data Rate	1K – 40Mbps Configurable
Distance	330ft / 100m Max
I/O Connections	**Transmitter** 1 x RJ45 port, 2 x HDMI IN, 1 x VGA IN, 1 x VIDEO IN, 1 x HDMI OUT, 1 x VGA OUT, 1 x RS232 (3.5 mm phoenix)
Input Video Signal	1.2 volts p-p
Input DDC Signal	5 volts p-p (TTL)
Supported Video Formats	1080P / 1080i / 720P / 576P / 480P/ 576i / 480i
Output Video	HDMI + HDCP
Output Audio	Analog Stereo
Mechanical	**HPX Series**
Housing	Black Painted Steel
Dimensions [L x W x H]	17.3" × 8.3" × 1.7" (440mm × 122mm × 44mm)
Weight	4.85lbs (2.2Kg)
Mounting	Ear Tabs
Power supply	AC 100-240V 50/60Hz
Power consumption	5W
Operation temperature	0~35°C [32~95°F]
Storage temperature	-20~70°C [-4~140°F]
Relative humidity	10~90% RH [no condensation]

Specifications subject to change without notice.

Model Name	HPX-RX-VW / SM
Technical	**HPX-RX-VW / SM**
Data Rate	1K – 40Mbps Configurable
Distance	330ft / 100m Max
I/O Connections	**Receiver** 4 x USB (A type), 1 x RJ45 port, 1 x HDMI OUT, 1 x RS232, 1 x AUDIO OUT, 1 x IR OUT
Input Video Signal	1.2 volts p-p
Input DDC Signal	5 volts p-p (TTL)
Supported Video Formats	1080P / 1080i / 720P / 576P / 480P/ 576i / 480i
Output Video	HDMI + HDCP
Output Audio	Analog Stereo
Mechanical	**HPX Series**
Housing	Black Painted Steel
Dimensions [L x W x H]	15.4" × 8.7" × 3.6" (269mm × 110mm × 24mm)
Weight	1.72lbs (0.78Kg)
Mounting	Ear Tabs
Power supply	12V DC 2A 5.5mm
Power consumption	4.56W
Operation temperature	0~35°C [32~95°F]
Storage temperature	-20~70°C [-4~140°F]
Relative humidity	10~90% RH [no condensation]

Specifications subject to change without notice.

APPENDIX 4 Warranty

Limited 3 Year Warranty

Aurora Multimedia Corp. (“Manufacturer”) warrants that this product is free of defects in both materials and workmanship for a period of 3 years as defined herein for parts and labor from date of purchase. This Limited Warranty covers products purchased in the year of 2009 and after. Motorized mechanical parts (Hard Drives, DVD, etc), mechanical parts (buttons, doors, etc), remotes and cables are covered for a period of 1 year. Touch screen displays are covered for 1 year; touch screen overlay components are covered for 90 days. Supplied batteries are not covered by this warranty. During the warranty period, and upon proof of purchase, the product will be repaired or replaced (with same or similar model) at our option without charge for parts or labor for the specified product lifetime warranty period.

This warranty shall not apply if any of the following:

A. The product has been damaged by negligence, accident, lightning, water, act-of-God or mishandling; or,

B. The product has not been operated in accordance with procedures specified in operating instructions: or,

C. The product has been repaired and or altered by other than manufacturer or authorized service center; or,

D. The product's original serial number has been modified or removed: or,

E. External equipment other than supplied by manufacturer, in determination of manufacturer, shall have affected the performance, safety or reliability of the product.

F. Part(s) are no longer available for product.

In the event that the product needs repair or replacement during the specified warranty period, product should be shipped back to Manufacturer at Purchaser's expense. Repaired or replaced product shall be returned to Purchaser by standard shipping methods at Manufacturer's discretion. Express shipping will be at the expense of the Purchaser. If Purchaser resides outside the contiguous US, return shipping shall be at Purchaser's expense.

No other warranty, express or implied other than Manufacturer's shall apply.

Manufacturer does not assume any responsibility for consequential damages, expenses or loss of revenue or property, inconvenience or interruption in operation experienced by the customer due to a malfunction of the purchased equipment. No warranty service performed on any product shall extend the applicable warranty period. This warranty does not cover damage to the equipment during shipping and Manufacturer assumes no responsibility for such damage.

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