

# KanexPro®



Premium Extender Kit for K-12 Educational Applications

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MPN: WP-EDUKIT4K

# Premium Extender Kit for K-12 Educational Applications

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## Thank you for purchasing this product

For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

## Surge protection device recommended

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lighting strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.



# Premium Extender Kit for K-12 Educational Applications

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# Premium Extender Kit for K-12 Educational Applications

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## 1. Introduction

The product is a multi-function AV intelligent education system. It offers 2HDMI and VGA video extension, video switching, system control and analog audio amplification. Uncompressed video and audio can be transmitted up to 230ft/70m. This design of HDBaseT™ technology allows for full usage of HDMI and controls over CAT5e/6/6A cable. The product supports Web GUI and panel button control.

Transmitter support HDCP 1.4, HDCP2.2 and can be switched manually, auto, hybrid or priority. And the maximum distance can be up to 70m at 1920x1200@60Hz or up to 40m at 4K @ 30 Hz.

Receiver support a microphone input, analog audio output, 2x30 at 4 ohms speaker output, and Relay control to the projector screen rise and fall or RS-232 control to the display power on and off. A USB port on the receiver will transmit interactive display connections to the transmitter.

The extender control panel supports volume control and system control. At the same time, it can support 2 HDMI and one VGA input selection.

The main control panel supports volume control, video switching and system control. At the same time, it supports 2 HDMI and one VGA input selection. The RS-232 port on the transmitter connects and provides power supply to the RS-232 port on the control panel via CAT5e/6/7 cable.

## 2. Features

- ★ HDMI 1.4b, HDCP 2.2 and HDCP 1.4 compliant.
- ★ Video resolutions up to 4K2K@30Hz, 1080p@120Hz and 1080P 3D@60Hz.
- ★ Audio up to 7.1 channels of High Definition audio pass through (LPCM, Dolby TrueHD, and DTS-HD Master Audio).
- ★ HDBaseT™ over a single CAT5e/6/7 cable up to 230ft/70m distance.
- ★ Support multi-VESA Standard VGA formats input.
- ★ Supports MIC input.
- ★ 2x30watts@4 ohms amplifier output.
- ★ Supports interactive display USB pass-through.
- ★ Supports Web GUI control.
- ★ Supports control panel volume control and system control.
- ★ Supports relay control.
- ★ Supports RS-232 control.
- ★ Supports volume control, video switching and system control

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- ☆ RS-232 port connects between control panel and transmitter via CAT5e/6/7 cable
- ☆ Supports transmitter power supply to control panel

## 3. Package Contents

1. 1x HDMI Extender Transmitter
2. 1x HDMI Extender Receiver
3. 1x Control Panel
4. 1x 24V/3.75A DC Power Supply
5. 2x Mounting ears
6. 1x User Manual

## 4. Specifications

<b>Technical</b>	
HDMI Compliance	HDMI 1.4
HDCP Compliance	HDCP 2.2/HDCP 1.4
Video Bandwidth	10.2 Gbps
Video Resolution	up to 4K2K@30Hz, 1080P@120Hz and 1080P 3D@60Hz
Color Space	RGB, YCbCr 4:4:4, YCbCr 4:2:2
Color Depth	8/10/12-bit
HDMI AudioFormats	LPCM 2/5.1/7.1CH, Dolby Digital, DTS 5.1, Dolby Digital+, Dolby TrueHD, DTS-HD Master Audio, Dolby Atmos, DTS:X
ESD Protection	Human body model — ±8kV (Air-gap discharge) & ±4kV (Contact discharge)
<b>Connections</b>	
Connections	Inputs: 2x HDMI IN Type A [19-pin female] 1x VGA [DB15 VGA female] 1x AUDIO IN [3.5mm Stereo Mini-jack] 1x RS-232/POWER [RJ45] Outputs: 1x HDBaseT Out [RJ45]

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Receiver	Inputs: 1x HDBaseT In [RJ45] 1x MIC IN [Screw Terminal] 1x USB [USB A TYPE] 1x TCP/IP [RJ45] Outputs: 1x HDMI OUT Type A [19-pin female] 1x RS-232 [Screw Terminal] 1x RELAY [Screw Terminal] 1x AUDIO OUT [Screw Terminal] 1x 2x30watts@4 ohms amplifier output [Screw Terminal]
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### Mechanical

Housing	Metal Enclosure
Color	Transmitter: White, Receiver: Black
Dimensions	114.3mm [W] x 69.9mm [D] x 22.2mm [H]
Weight	Transmitter: 305g, Receiver: 758g
Power Supply	Input: AC100 - 240V 50/60Hz, Output: DC 24V/3.75A (US/EU standards, CE/FCC/UL certified)
Power Consumption	75W (max)
Operating Temperature	32 - 104°F / 0 - 40°C
Storage Temperature	-4 - 140°F / -20 - 60°C
Relative Humidity	20 - 90% RH (no condensation)

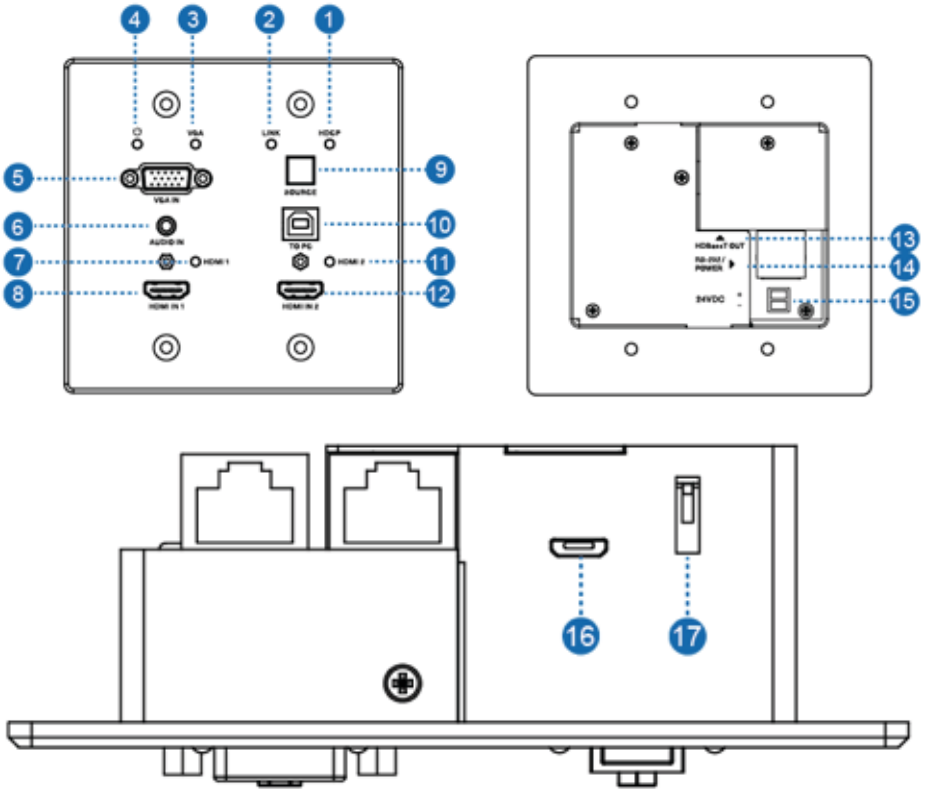
### Control Panel Mechanical

Housing	Metal Enclosure
Color	White — Front Panel, Black — Rear Panel
Dimensions	114.3mm [W] x 69.9mm [D] x 22.2mm [H]
Weight	180g
Operating Temperature	32 - 104°F / 0 - 40°C
Storage Temperature	-4 - 140°F / -20 - 60°C
Relative Humidity	20 - 90% RH (no condensation)

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## 5. Operation Controls and Functions

### 5.1 Transmitter Panel



Number	Name	Function Description
1	HDCP LED	HDCP compliance indicator. <ul style="list-style-type: none"> <li>■ OFF: HDMI input is not carrying HDCP content.</li> <li>■ ON: HDMI input is carrying HDCP content.</li> </ul>
2	LINK LED	HDBaseT Link status indicator. <ul style="list-style-type: none"> <li>■ OFF: No Link.</li> <li>■ GREEN: Link successful.</li> <li>■ Blink GREEN: Link abnormal.</li> </ul>

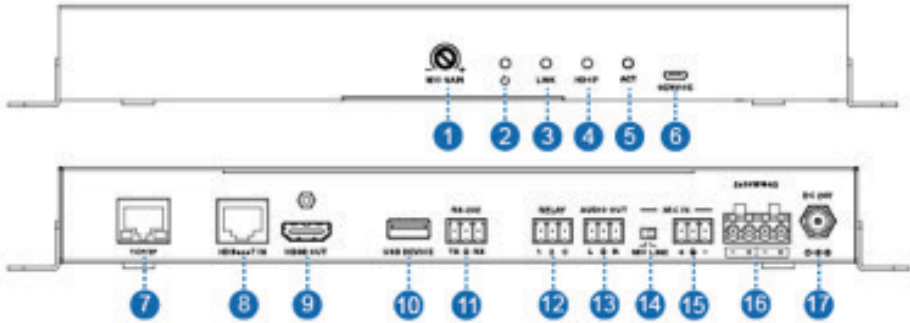
## Premium Extender Kit for K-12 Educational Applications

Number	Name	Function Description
3	VGA LED	VGA signal indicator. <ul style="list-style-type: none"> <li>■ OFF: There is no +5V HPD or VGA signal detected on input.</li> <li>■ FLASHING: +5V HPD or VGA signal is detected.</li> <li>■ GREEN: VGA is active input and VGA signal is detected.</li> </ul>
4	POWER LED	System power indicator.
5	VGA IN	Connect to VGA source.
6	AUDIO IN	Connect to external audio source for VGA signal.
7	HDMI 1 LED	HDMI 1 signal indicator. <ul style="list-style-type: none"> <li>■ OFF: There is no +5V HPD or HDMI signal detected on input.</li> <li>■ FLASHING: +5V HPD or HDMI signal is detected.</li> <li>■ GREEN: HDMI is active input and HDMI signal is detected.</li> </ul>
8	HDMI 1 IN	Connect to HDMI source.
9	SOURCE	Press it to select one source.
10	TO PC	Connect PC to transmit USB control signal from the Receiver USB device in.
11	HDMI 2 LED	HDMI 2 signal indicator. <ul style="list-style-type: none"> <li>■ OFF: There is no +5V HPD or HDMI signal detected on input</li> <li>■ FLASHING: +5V HPD or HDMI signal is detected.</li> <li>■ GREEN: HDMI is active input and HDMI signal is detected</li> </ul>
12	HDMI 2 IN	Connect to HDMI source device.
13	HDBaseT OUT	Connect to HDBaseT Receiver with a Cat5e/6/7 cable.
14	RS-232/POWER	Connect to Control Panel via CAT5e/6/7 cable.
15	24VDC (OPTIONAL)	Connects 24V/1A adaptor to AC wall outlet for power supply.
16	Micro-USB	For firmware updated use.
17	DIP SWITCH	Select upgrade type.



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## 5.2 Receiver Panel

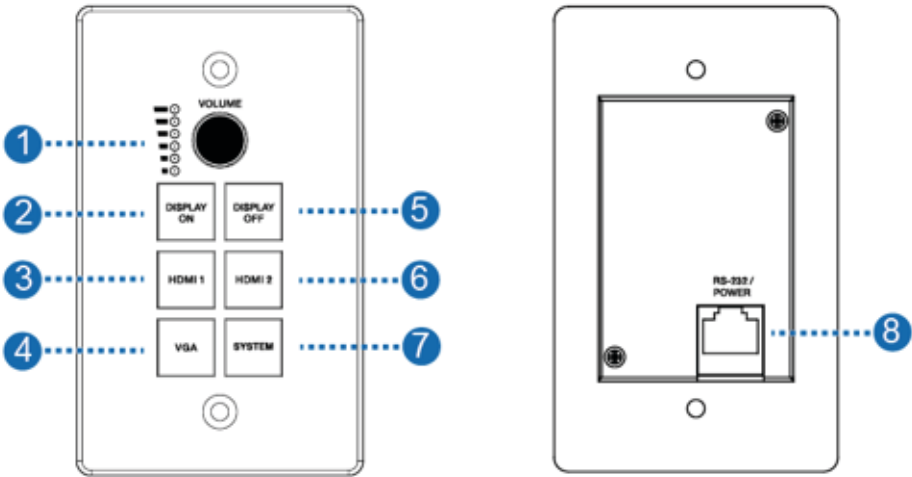


Number	Name	Function Description
1	MIC GAIN	Set the MIC input gain.
2	POWER LED	System power indicator.
3	LINK LED	HDBaseT Link status indicator. <ul style="list-style-type: none"> <li>■ OFF: No Link.</li> <li>■ GREEN: Link successful.</li> <li>■ Blink GREEN: Link abnormal.</li> </ul>
4	HDCP LED	HDCP compliance indicator. <ul style="list-style-type: none"> <li>■ OFF: HDMI input is not carrying HDCP content.</li> <li>■ ON: HDMI input is carrying HDCP content</li> </ul>
5	ACT	System work indicator. <ul style="list-style-type: none"> <li>■ OFF: System standby or power off.</li> <li>■ Blink GREEN: System working.</li> </ul>
6	SERVICE	For firmware updated use.
7	TCP/IP	Connect to a PC access to the Web GUI for system setting.
8	HDBaseT IN	Connect to HDBaseT Transmitter with a Cat5e/6/7 cable.
9	HDMI OUT	Connect to a HDMI display device.
10	USB DEVICE	Connect to an interactive display.
11	RS-232	RS-232 control for the display.
12	RELAY	To control the projector screen rise and fall.
13	AUDIO OUT	Connect to a speaker.
14	MIC LINE SWITCH	<ul style="list-style-type: none"> <li>■ When the switch is set to "MIC", the microphone input is used to connect a dynamic microphone.</li> <li>■ When the switch is set to "LINE", the microphone input is used for connecting a line level audio source or wireless microphone output.</li> </ul>

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Number	Name	Function Description
15	MIC IN	Using Phoenix terminal cable to connect microphone input.
16	2X30 watts @4ff	Connect to speaker out.
17	DC 24V	Connect 24V/3.75A adaptor to AC wall outlet for power supply.

## 5.3 Operations Controls and Functions



Number	Name	Function Description
1	VOLUME Knob and Volume level indicator	Adjust amplifier volume output . <ul style="list-style-type: none"> <li>■ Clockwise adjustment to increase the volume.</li> <li>■ Counter-clockwise adjustment to decrease the volume.</li> </ul>
2	DISPLAY ON	Run Display ON Subroutine, see section 7. Press and hold button to close relay 1.
3	HDMI 1	Select HDMI 1 signal as input source.
4	VGA	Select VGA signal as input source.
5	DISPLAY OFF	Run Display OFF Subroutine, see section 7. Press and hold button to close relay 2.
6	HDMI 2	Select HDMI 2 signal as input source.
7	SYSTEM	Long-press the button for 3 seconds to open or close the system, see section 6.
8	RS-232/POWER	Connect to Transmitter via CAT5e/6/7 cable.

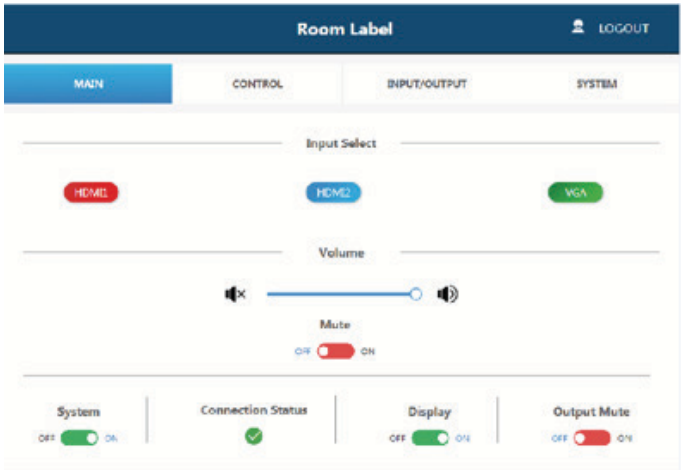
# Premium Extender Kit for K-12 Educational Applications

## 6. Web GUI User Guide

The product can be controlled via Web GUI through TCP/IP port. The default IP address is 192.168.2.100. When the product has finished connection. You can set the IP address to your PC/laptop Internet Explorer and click “Search” to enter Web GUI login page. In the login page, you need set the ‘User’ and ‘Password’. The default ‘User Name’ and ‘Password’ for the admin are both ‘admin’. When you set it over and you need click ‘Login’ button to enter Web GUI function page. The login page likes below:



### Main page



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①

Shows the status of the input signal.

**Green:** The input port has connected an active signal.

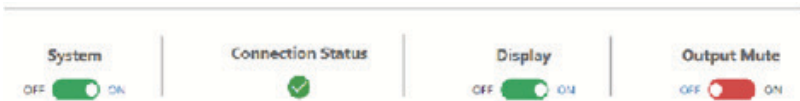
**Blue:** The input port has connected success but it has not active signal.

**Red:** The input port has not connected.



②

Volume control outputs for the amplifier and the audio extractor. Adjusting the slider to increase or decrease outputs for the amplifier and the audio extractor. Toggle is the Mute setting to silence the amplifier and the audio extractor outputs. Mute setting does not silence the audio on the HDMI output line.



③

**System** - runs the system on/off subroutine when switches the toggle. (see section 7)

**Connection Status** - indicates when the connection is well about the web server.

**Display** - Runs the display on/off subroutine when switches the toggle, see section 8.

**Output Mute** - when on, turns off the video output but it does not mute audio.

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## Control Page

### Display System Sync

ENABLE  DISABLE

①

**Display System Sync:** When the toggle is in 'enable' position, the display on/off subroutine will run the system subroutine on/off every time. (see section 7)

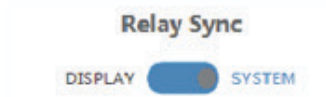
### Auto System

ENABLE  DISABLE

②

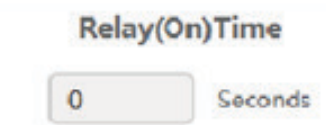
**Auto System:** When the toggle is in 'enable' position, the system will turn off when no signals are actively connected to the plate for a programmable amount of time. See No Activity Timeout in the INPUT/CONTROL section.

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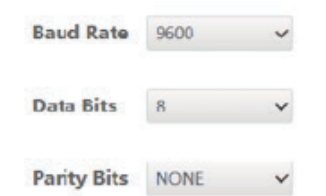
③

**Relay Sync:** Sets the relays to either be triggered with the display subroutine on/off or the system subroutine on/off. (see section 7 and 8)



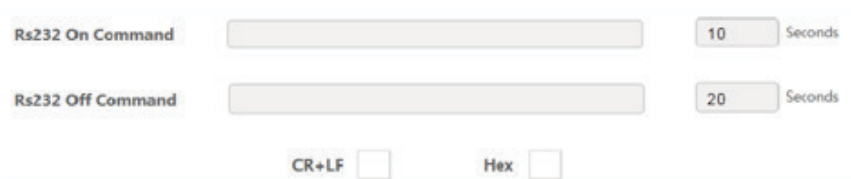
④

**Relay (On) Time:** Sets the amount of time that the relay contacts will stay close.



⑤

The RS-232 communication settings for the RS-232 port.



⑥

**RS232 On Command:** Sends out data when Display On subroutine is called.

**RS232 Off Command:** Sends out data when Display Off subroutine is called.

**CR + LF:** Appends a carriage return and line feed character to the end of the input strings as they are sent out.

**Hex:** The commands can be input as hexadecimal numbers when the Hex checkbox is marked.

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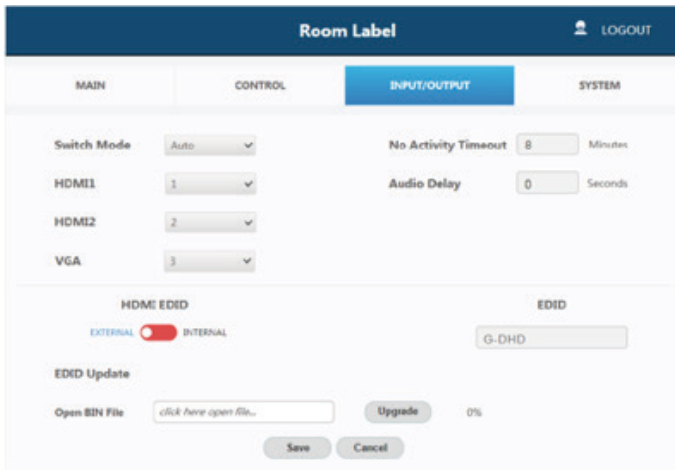


⑦

**Save:** After any setting has made, the settings must be saved by pressing the 'Save' button.

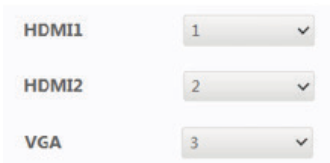
**Cancel:** Wait for the popup window to close automatically before continuing to make further setting, while it saves.

## INPUT/OUTPUT Page



①

**Switch Mode:** Sets how the switcher plate will change between input signals. it includes 'Auto' mode and 'Manual' mode.



②

Sets the priority to use when the switch mode is set to priority mode. 1 is the highest priority and 3 is the lowest.

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**No Activity Timeout:** Sets the amount of time it will take for the unit to turn itself off when there is not detected input signal.



**Audio Delay:** Sets how many seconds the audio that the amp is delayed.



**HDMI EDID:** When set to Internal, the EDID communicated to the source is the one stored in the device's internal memory.

**EDID:** The name of the current EDID.

**EDID Update:** Upload a .bin file to change what EDID is stored in the device's internal memory that is used when EDID is set to internal.



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## SYSTEM page

Room Label

LOGOUT

MAIN CONTROL INPUT/OUTPUT SYSTEM

IP Address 192.168.2.100

Subnet Mask 255.255.255.0

Gateway 192.168.2.1

Room Label Room Label

User Password user

Admin Password admin

Hardware Version 2.10

Software Version T 1.14 R.1.00 C.1.13

Firmware Update

Open BIN File click here open file... Upgrade 0%

Save Cancel

IP Address 192.168.2.100

Subnet Mask 255.255.255.0

Gateway 192.168.2.1

①

The network settings of the device's internal system.

Room Label Room Label

②

**Room Label:** This is the user-assigned label that appears at the top of the web interface.

User Password user

Admin Password admin

③

The user and the admin password settings

## Premium Extender Kit for K-12 Educational Applications

Hardware Version  Software Version

Firmware Update

Open BIN File   0%

④

Upload new firmware versions and see current ones install. This can update the firmware of the control panel and the receiver box, not the two-gang transmitter. To update the firmware of the two-gang switcher, use the USB port on the plate.

**Note:** The default 'Username' and 'Password' for the user are both 'user'. The user login limits the amount of functions accessible

Please login to continue

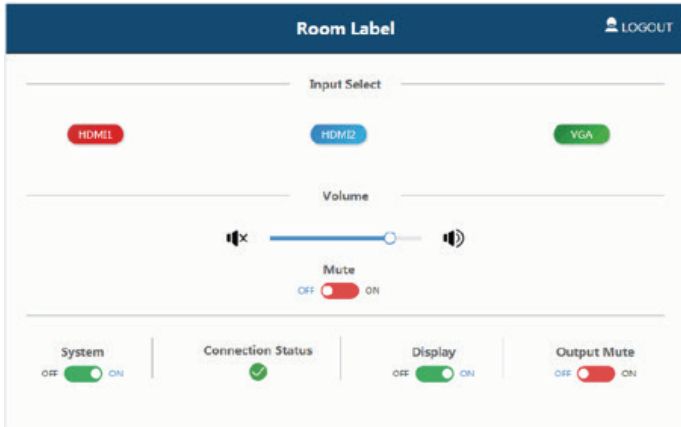
User:

Password:

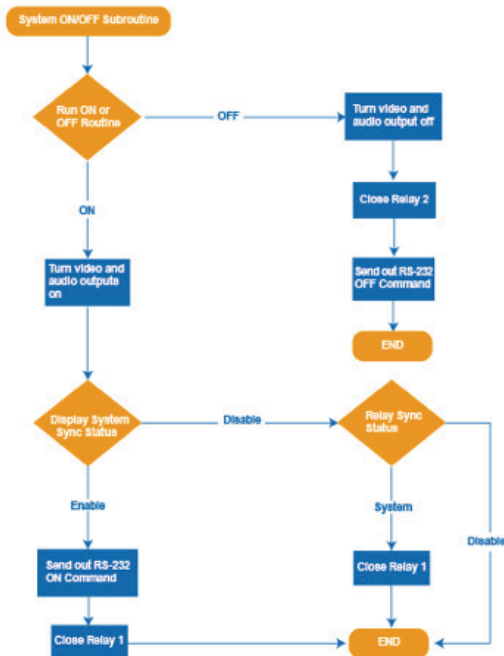
When you set it over and you can click 'Login' button to enter Web GUI function page.

# Premium Extender Kit for K-12 Educational Applications

The page likes below:



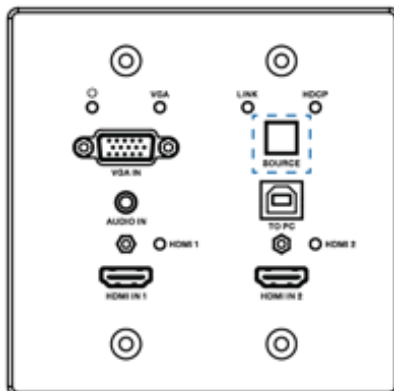
## 7. System ON/OFF Subroutine



## 7. Display ON/OFF Subroutine



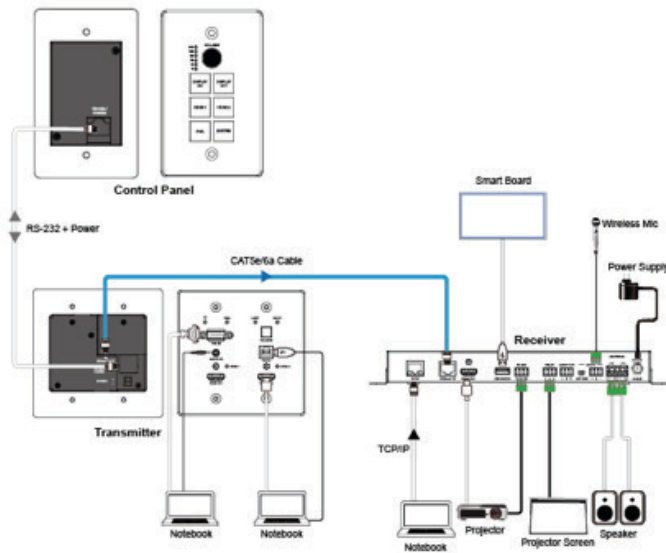
## 9. System Reset



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To perform a system reset hold the source button (SOURCE button) for 20 seconds until the HDCP light flashes three times. When the system is reset, user settings will return to their default values this includes: passwords, room label, switching mode, IP address, etc.

## 10. Application Example



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## After-sales Service

If problems arise when operating the device, please refer to this user manual. Any transport costs are borne by the users during the warranty.

**1. Product Limited Warranty:** We warrant that products will be free from defects in materials and workmanship for three years, which starts from the first day the product exits warehouse. (Make note of the serial number on the product) Proof of purchase in the form of a bill of sale or receipted invoice **MUST** be presented to obtain warranty service.

### 2. What the warranty does not cover:

- Warranty expiration.
- Factory applied serial number has been altered or removed from the product.
- Damage, deterioration or malfunction caused by:
  - Normal wear and tear
  - Use of supplies or parts not meeting our specifications
  - No certificate or invoice as the proof of warranty.
  - The product model showed on the warranty card does not match with the model of the product for repairing or had been altered.
- Damage caused by force majeure.
- Servicing not authorized
- Any other causes which does not relate to a product defect
- Delivery, installation or labor charges for installation or setup of the product

**3. Technical Support:** Email or call our after-sales department if there are any problems or any unanswered questions. Please inform us the following information about your cases:

- Product version and name.
- Detailed failure situations.

**Remarks:** For any questions or troubleshooting please contact your local distributor or email [support@kanexpro.com](mailto:support@kanexpro.com) or call 888-975-1368

## Warranty

### A. LIMITED WARRANTY

KanexPro™ warrants that (a) its products (the “Product”) will perform greatly in agreement with the accompanying written materials for a period of 36 months (3 full years) from the date of receipt and (b) that the product will be free from defects in materials and workmanship under normal use and service for a period of 3 years.

# **Premium Extender Kit for K-12 Educational Applications**

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## **B. CUSTOMER REMEDIES**

KanexPro's entire liability and Customer's exclusive remedy shall be, at KanexPro™ option, either return of the price paid for the product, or repair or replacement of the Product that does not meet this Limited Warranty and which is returned to KanexPro™ with a copy of customers' receipt. This Limited Warranty is void if failure of the Product has resulted from accident, abuse, or misapplication. Any replacement Product will be warranted for the remainder of the original warranty period of 3 years, whichever is longer.

## **C. NO OTHER WARRANTIES**

To the maximum extent permitted by applicable law, KanexPro™ disclaims all other warranties, either express or implied, including, but not limited to implied warranties of merchantability and fitness for a purpose, regarding the product and any related written materials. This limited warranty gives customers specific legal rights. Customers may have other rights depending on the jurisdiction.

## **D. NO LIABILITY FOR DAMAGES**

To the maximum extent permitted by applicable law, in no event shall KanexPro™ be liable for any damages whatsoever (including without limitation, special, incidental, consequential, or indirect damages for personal injury, loss of business profits, business interruption, loss of business information, or any other pecuniary loss) arising out of the use of or inability to use this product, even if KanexPro™ has been advised of the possibility of such damages

**KanexPro™**

Brea, California

[www.kanexpro.com](http://www.kanexpro.com)