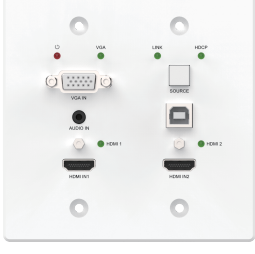
ADERTECH

H1BT-U4HWP-70AMP

Multi-function AV intelligent education system





User Manual

VER 1.1

Thank you for purchasing this product

We have done everything possible to ensure that our equipment pleases our consumers. When solving any problems in the operation and connection ADERTECH equipment, it is best to contact authorized companies and specialists who work with our equipment. Our equipment is intended for professional use, so you have professional skills in using such equipment. ADERTECH is a manufacturer of a wide range of multimedia solutions.

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.

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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.

Control Panel CTRL-WPK6V (available optionally) supports volume control and system control. At the same time, it can support 2 HDMI and one VGA input selection.

. 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 **CTRL-WPK6V (**available optionally**)**
☆ Supports relay control.
☆ Supports RS-232 control.

3. Package Contents

① 1× HDMI Extender Transmitter
② 1× HDMI Extender Receiver
③ 1× 24V/3.75A DC Power Supply
④ 2× Mounting ears
⑤ 1× User Manual

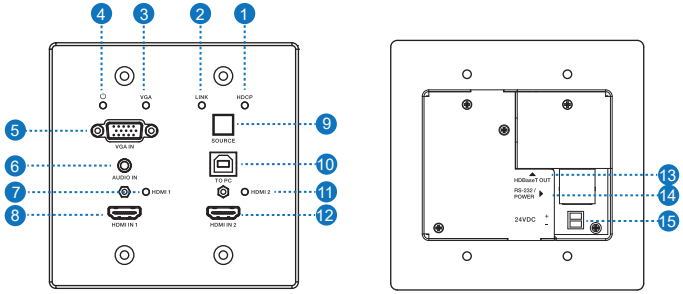
4. Specifications

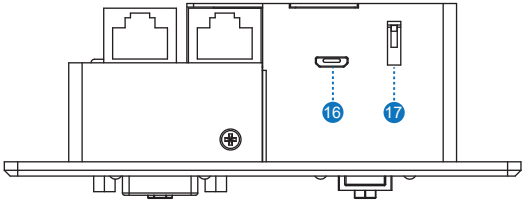
Technical	
HDMI Compliance	HDMI 1.4
HDCP Compliance	HDCP 2.2/HDCP 1.4
Video Bandwidth	10.2 Gbps
Video Resolution	up to 4K2K@30Hz,1080P@120Hz and 1080P 3D @60Hz
Color Space	RGB, YCbCr 4:4:4, YCbCr 4:2:2
Color Depth	8/10/12-bit
HDMI Audio Formats	LPCM 2/5.1/7.1CH, Dolby Digital, DTS 5.1, Dolby Digital+, Dolby TrueHD, DTS-HD Master Audio, Dolby Atmos, DTS:X
ESD Protection	Human body model — ±8kV (Air-gap discharge) & ±4kV (Contact discharge)
Connections	
Transmitter	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]
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]

Mechanical	
Housing	Metal Enclosure
Color	Transmitter: White, Receiver: Black
Dimensions	Transmitter: 115.9mm [W] x 114.3mm [D] x 38.7mm [H] Receiver: 250mm [W] x 104mm [D] x 30mm [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)

5. Operation Controls and Functions

5.1 Transmitter Panel

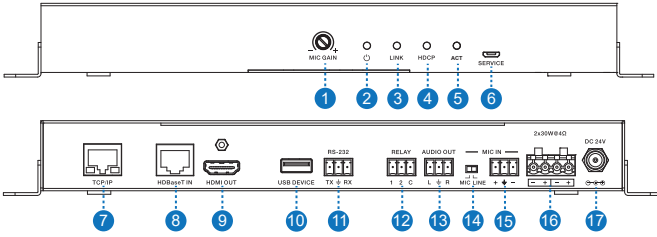




Number	Name	Function description
1	HDCP LED	HDCP compliance indicator. ▪ OFF: HDMI input is not carrying HDCP content. ▪ ON: HDMI input is carrying HDCP content.
2	LINK LED	HDBaseT Link status indicator. ▪ OFF: No Link. ▪ GREEN: Link successful. ▪ Blink GREEN: Link abnormal.
3	VGA LED	VGA signal indicator. ▪ OFF: There is no +5V HPD or VGA signal detected on input. ▪ FLASHING: +5V HPD or VGA signal is detected. ▪ GREEN: VGA is active input and VGA signal is detected.
4	POWER LED	System power indicator.
5	VGA IN	Connect to VGA source.
6	ADUIO IN	Connect to external audio source for VGA signal.
7	HDMI 1 LED	HDMI 1 signal indicator. ▪ OFF: There is no +5V HPD or HDMI signal detected on input. ▪ FLASHING: +5V HPD or HDMI signal is detected. ▪ GREEN: HDMI is active input and HDMI signal is detected.
8	HDMI 1 IN	Connect to HDMI source device.

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. ▪ OFF: There is no +5V HPD or HDMI signal detected on input ▪ FLASHING: +5V HPD or HDMI signal is detected. ▪ GREEN: HDMI is active input and HDMI signal is detected
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.

5.2 Receiver Panel

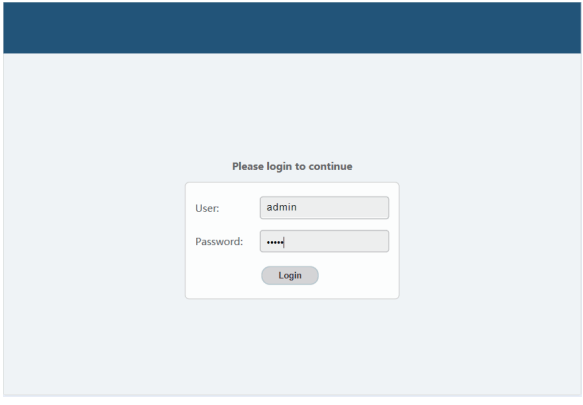


Number	Name	Function description
1	MIC GAIN	Set the MIC input gain.
2	POWER LED	System power indicator.

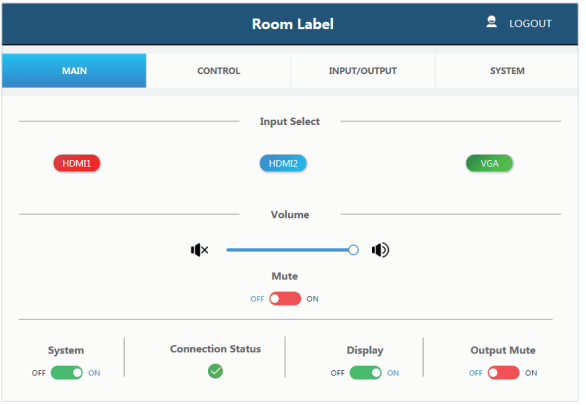
3	LINK LED	HDBaseT Link status indicator. ▪ OFF: No Link. ▪ GREEN: Link successful. ▪ Blink GREEN: Link abnormal.
4	HDCP LED	HDCP compliance indicator. ▪ OFF: HDMI input is not carrying HDCP content. ▪ ON: HDMI input is carrying HDCP content.
5	ACT	System work indicator. ▪ OFF: System standby or power off. ▪ Blink GREEN: System working.
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	▪ When the switch is set to “MIC”, the microphone input is used to connect a dynamic microphone. ▪ When the switch is set to “LINE”, the microphone input is used for connecting a line level audio source or wireless microphone output.
15	MIC IN	Using Phoenix terminal cable to connect microphone input.
16	2X30 watts @4Ω	Connect to speaker out.
17	DC 24V	Connect 24V/3.75A adaptor to AC wall outlet for power supply.

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



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.

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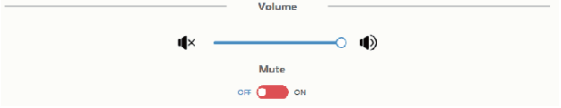


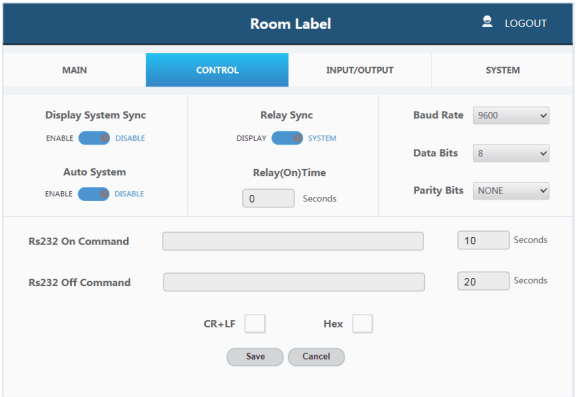
Volume control outputs for the amplifier and the audio extractor. Adjusting the slider to increase or decrease outputs for the amplifier and the audio extractor. Toggle is the Mute setting to silence the amplifier and the audio extractor outputs. Mute setting does not silence the audio on the HDMI output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

CONTROL page



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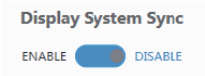

Display System Sync: When the toggle is in ‘enable’ position, the display on/off subroutine will run the system subroutine on/off every time. (see section 7)

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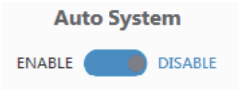

Auto System: When the toggle is in ‘enable’ position and the system is in standby status, if a new signal is connected, the system will change to active and fully controllable. When the toggle is in ‘disable’ position and the system is in standby status, if a new signal is connected, the system status won’t change.

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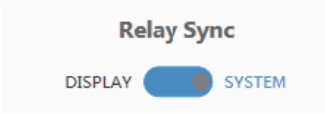
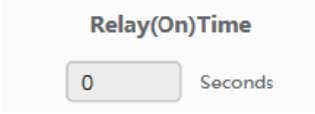


Relay Sync: Sets the relays to either be triggered with the display subroutine on/off or the system subroutine on/off. (see section 7 and 8)

④



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

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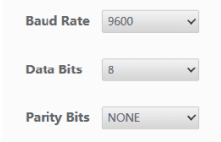

The RS-232 communication settings for the RS-232 port.

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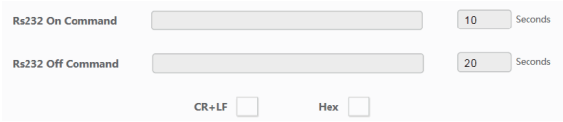


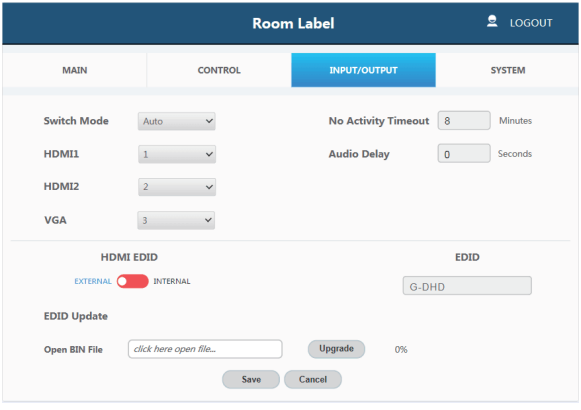
RS232 On Command: Sends out data when Display On subroutine is called.
RS232 Off Command: Sends out data when Display Off subroutine is called.
CR + LF: Appends a carriage return and line feed character to the end of the input strings as they are sent out.
Hex: The commands can be input as hexadecimal numbers when the Hex checkbox is marked.

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



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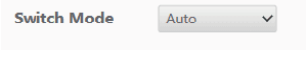

Switch Mode: Sets how the switcher plate will change between input signals. it includes ‘Auto’ mode and ‘Manual’ mode.

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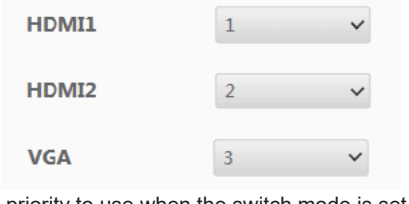

Sets the priority to use when the switch mode is set to priority mode. 1 is the highest priority and 3 is the lowest.

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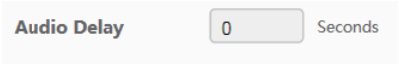
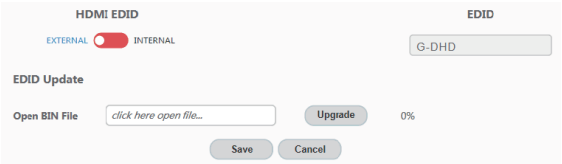
No Activity Timeout: Sets the amount of time it will take for the unit to turn itself off when there is not detected input signal.

④



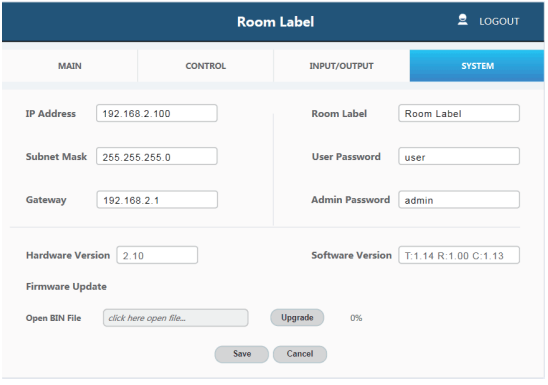
Audio Delay: Sets how many seconds the audio that the amp is delayed.

⑤



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.

SYSTEM page



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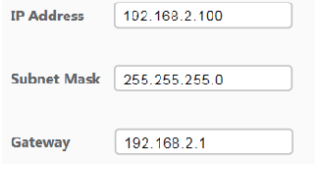

The network settings of the device's internal system.

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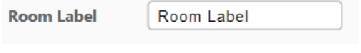

Room Label: This is the user-assigned label that appears at the top of the web interface.

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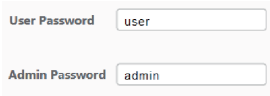


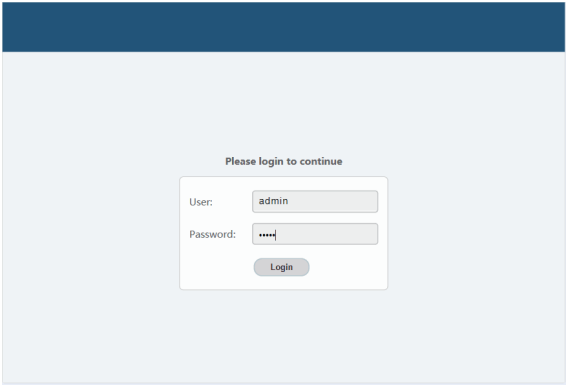
The user and the admin password settings

④

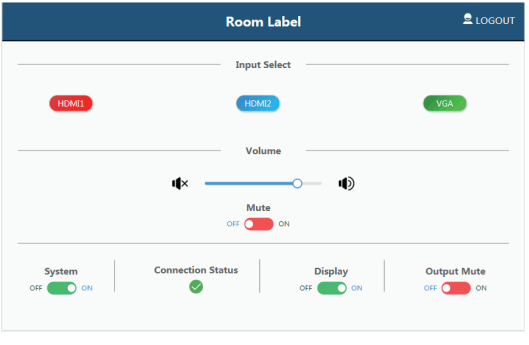


Upload new firmware versions and see current ones install. This can update the firmware of the control panel and the receiver box, not the two-gang transmitter. To update the firmware of the two-gang switcher, use the USB port on the plate.

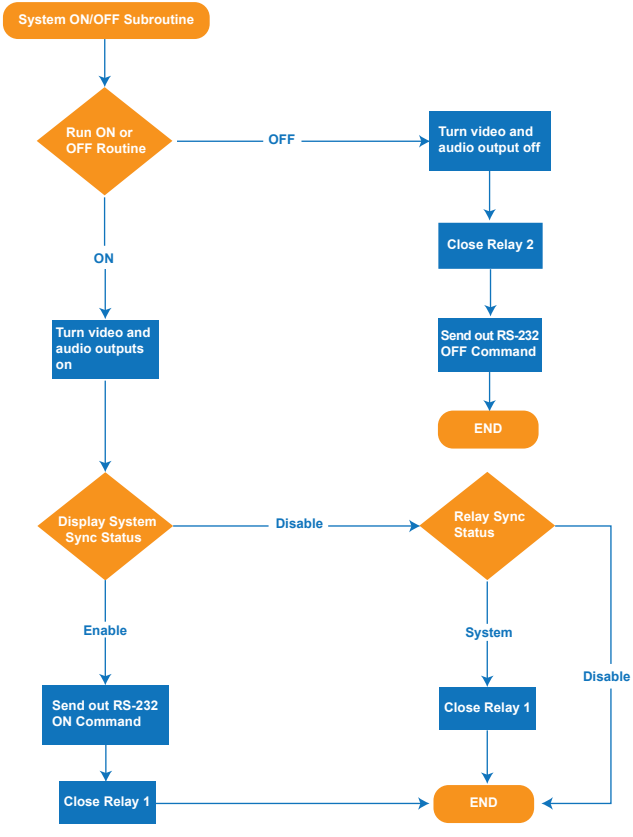
Note: The default ‘Username’ and ‘Password’ for the user are both ‘**user**’. The user login limits the amount of functions accessible



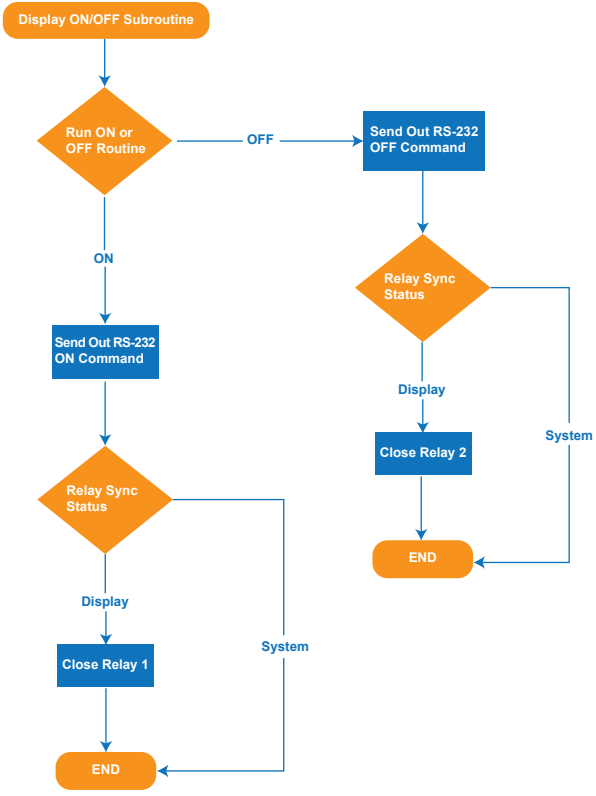
When you set it over and you can click ‘Login’ button to enter Web GUI function page. The page likes below:



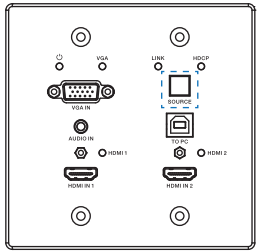
7. System ON/OFF Subroutine



8. Display ON/OFF Subroutine

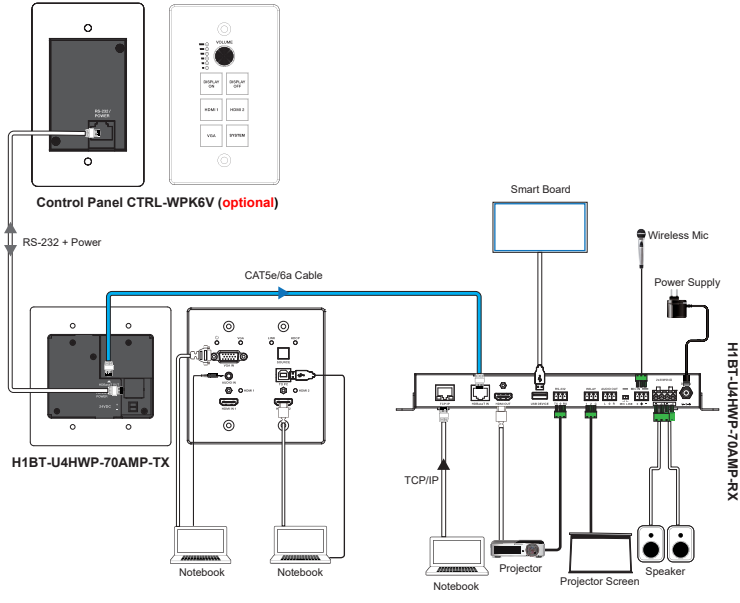


9. System Reset



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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