



860020-860025 User Manual EZCast ProAV WiFi



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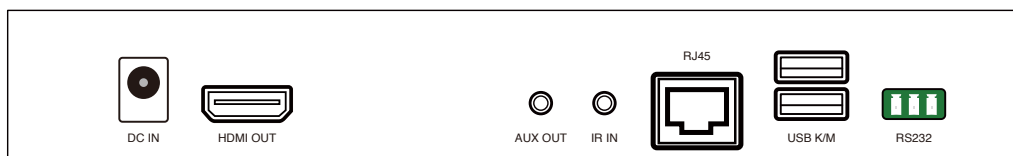
Product Overview

1-1. Benefits and Features

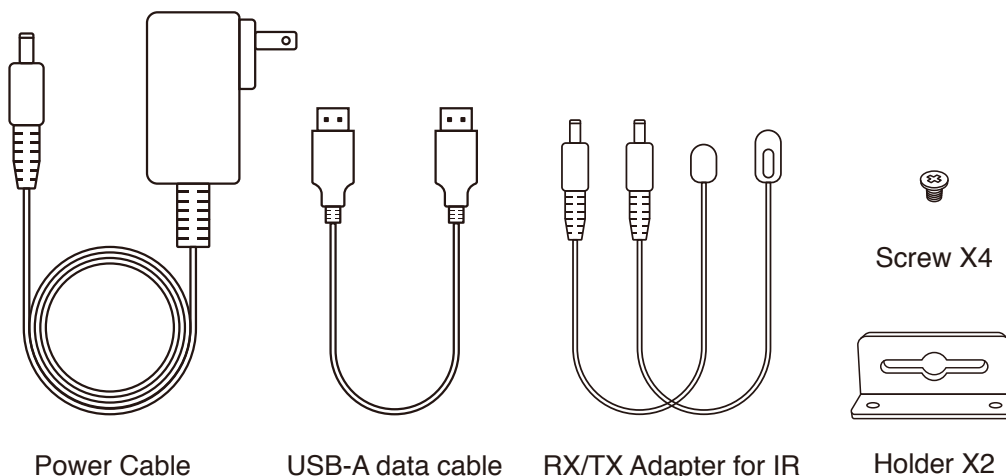
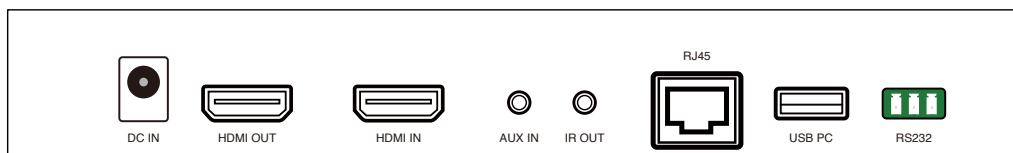
1. Modular design to assemble for Extender, Splitter and Switcher for up to 15x15 applications.
2. Extends 4K 30P, 1080 60P HDMI signal up to 30m
3. Supports IR (20KHz~60KHz) extension and RS232 extension over IP.
4. Supports Stereo Audio, independent to HDMI extension.
5. Supports USB (Keyboard, Mouse) extension KVM switch function by button selection.
6. Supports EDID pass-through and Transmitter resolution pass-through, including most popular 16:9, 16:10, 4:3 resolution and timing (Support list please refer to appendix).
7. Supports cloud firmware upgrading when connecting to the router with internet access
9. Supports Web settings through Ethernet connection and CMS (Central Management System) installed for Win/Mac OS connecting to the L2 Switch incorporated.

1-2. What's in the box

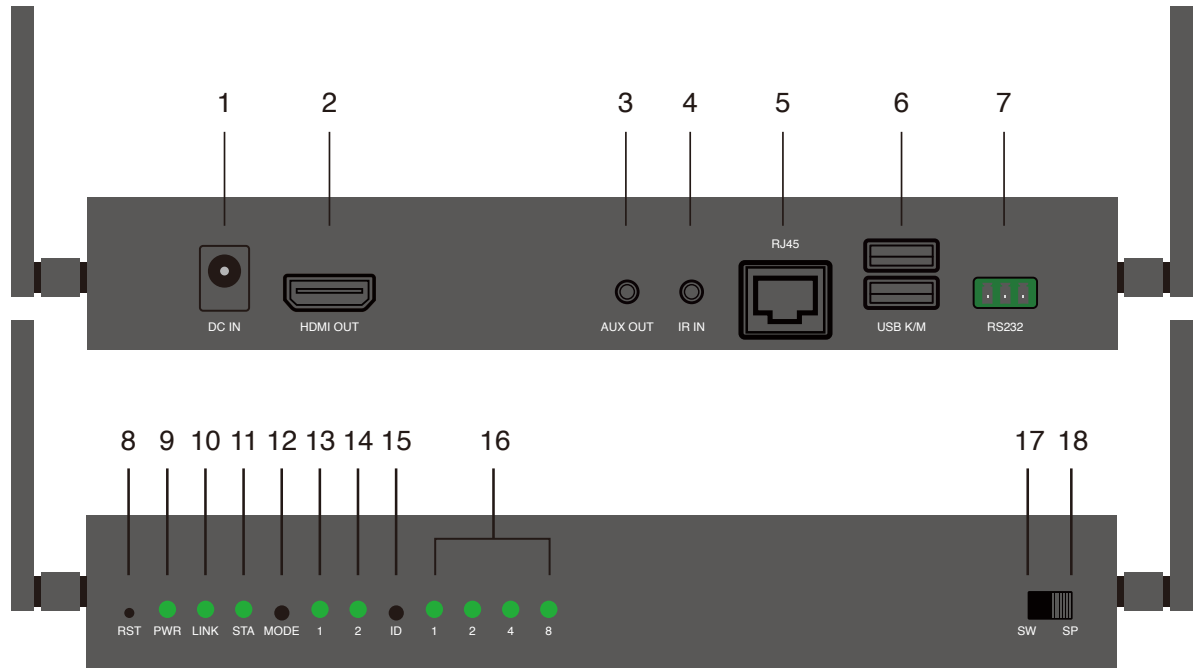
ER



ET

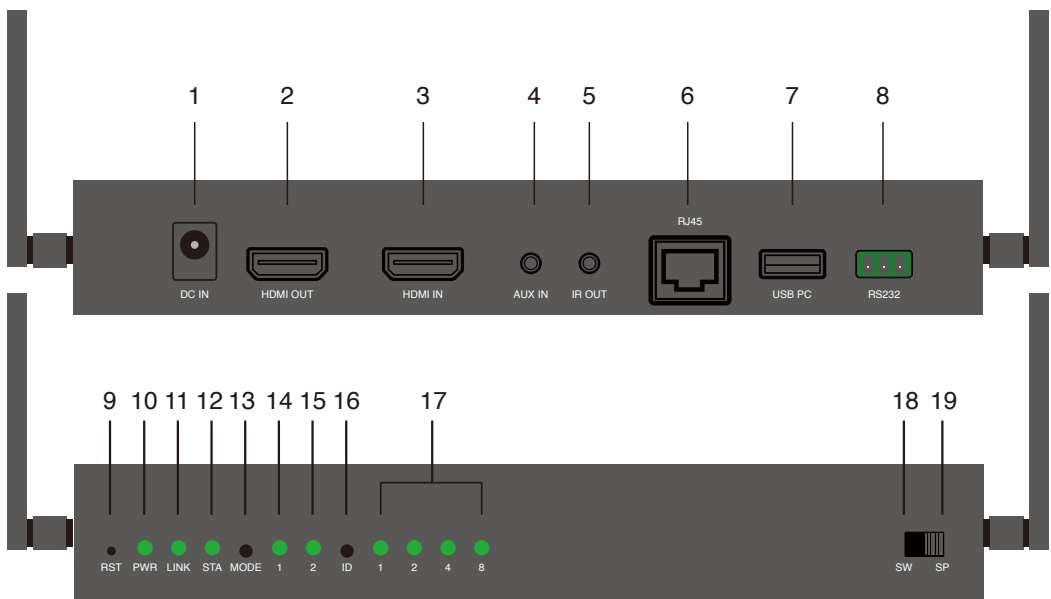


1-5. WR Receiver Overview



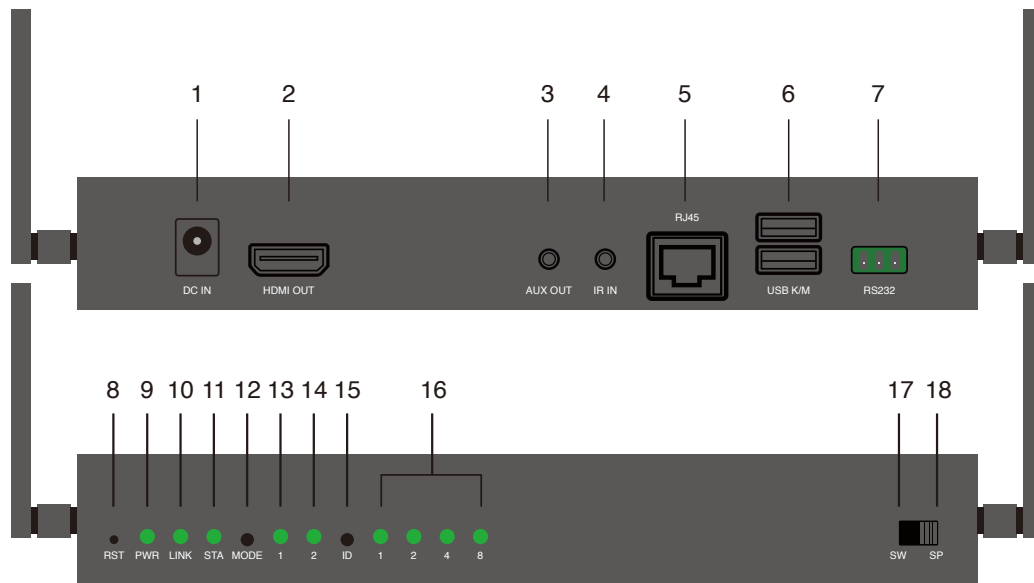
Item	Description
1	Power port.
2	HDMI out.
3	AUX out.
4	IR in.
5	RJ45: Only for specific settings like firmware upgrade and CMS system control.
6	USB port for keyboard and mouse.
7	RS232.
8	Reset.
9	Power light.
10	Ethernet light.
11	HDMI light.
12	Mode button.
13	Display mode: Graphic mode (dark)/ Video mode (bright).
14	Channel bit: High bits (bright)/ Low bits (dark).
15	Channel ID button.
16	Channel ID.
17	Switch mode.
18	Splitter mode.

1-6. WT Transmitter Overview



Item	Description
1	Power port.
2	HDMI out for loopback.
3	HDMI in.
4	AUX in.
5	IR out.
6	RJ45: Only for specific settings like firmware upgrade and CMS system control.
7	USB port for reverse control.
8	RS232.
9	Reset.
10	Power light.
11	Ethernet light.
12	HDMI light.
13	
14	
15	Channel bit: High bits (dark)/ Low bits (bright).
16	Channel ID button.
17	Channel ID.
18	Switch mode.
19	Splitter mode.

2-3. WR



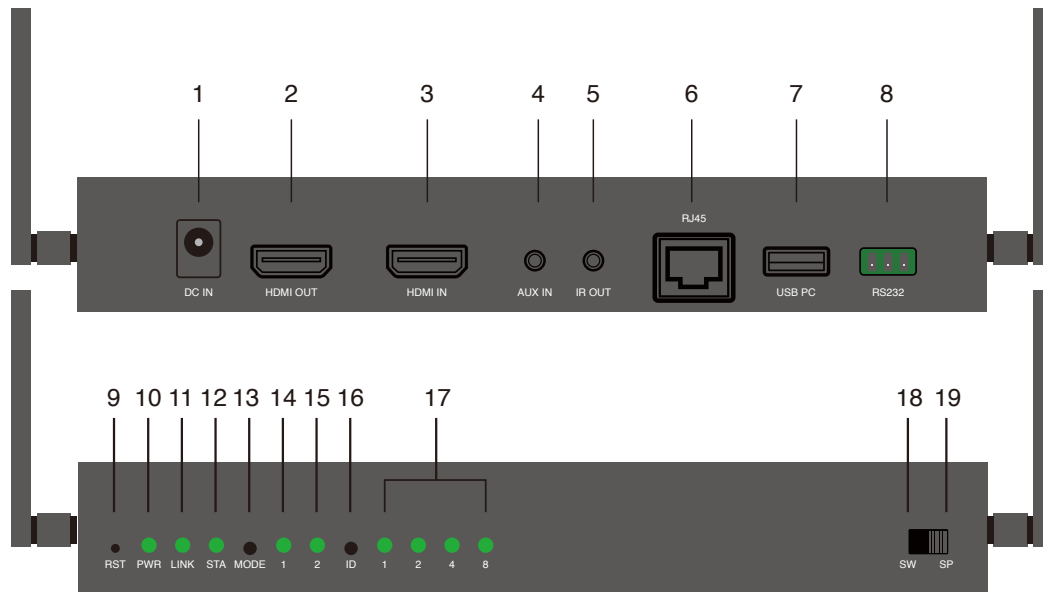
2-3-1. Port

1. DC IN port: 12V/1A power supply is required.
2. HDMI OUT port: Connect to the monitor for display.
3. AUX OUT port: Output audio to the speaker connected. Note that HDMI OUT port receives audio signal simultaneously.
4. IR IN port: Input IR signal for remote control.
5. RJ45 port: Connect to router or switch with LAN cable for bridge. Only for specific settings like firmware upgrade and CMS system control.
6. USB K/M: Support external keyboard and mouse connection for remote control.
7. RS232: Input RS232 signal for remote control.

2-3-2. Light signal and button

8. Reset hole: Long press for 5 seconds and release when 4 channel ID signals flash to reset to factory default settings.
9. PWR light: Lighting when power is supplied.
10. LINK light: Flashing when data is transmitting.
11. STA light: Lighting when HDMI cable is connected.
12. MODE button: Click to switch display mode (lighting for mode 1), and long press to optimize the resolution.
13. Mode 1 light (Display mode): Light off indicates graphic mode with shorter latency, and light on indicates video mode with less package lost rate.
14. Mode 2 light (Channel bit): Light on indicates channel adjustment is for high-bit channel, while light off indicates channel adjustment is for low-bit channel.
15. ID button: Click to switch channel ID, and long press to switch between high-bit and low-bit channel adjustment (lighting for mode 2).
16. Channel signal: The channel number is the sum of what the light-on signals represent.
17. Switch mode: Display the screen of WT with the same channel ID.
18. Splitter mode: Direct connection to WT for 1 to 1 extending display or 1 to N multicast. No channel ID should be set.

2-4. WT



2-4-1. Port

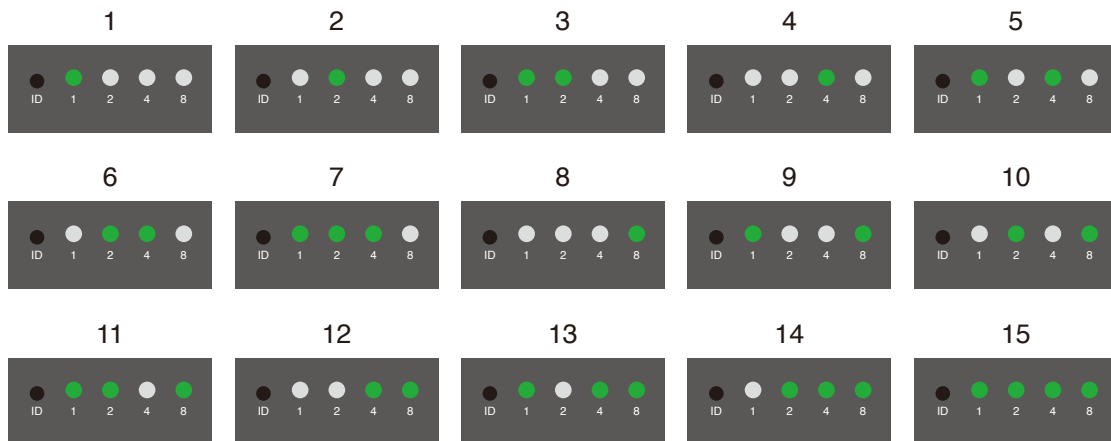
1. DC IN port: 12V/1A power supply is required.
2. HDMI OUT port: Connect to the monitor for loopback.
3. HDMI IN port: Connect to your device (laptop or computer).
4. AUX IN port: Input audio to replace that from HDMI source.
5. IR OUT port: Output IR signal for remote control.
6. RJ45 port: Connect to router or switch with LAN cable for bridge. Only for specific settings like firmware upgrade and CMS system control.
7. USB PC: Connect to your computer to receive reverse control signals.
8. RS232: Output RS232 signal for remote control.

2-4-2. Light signal and button

9. Reset hole: Long press for 5 seconds and release when 4 channel ID signals flash to reset to factory default settings.
10. PWR light: Lighting when power is supplied.
11. LINK light: Lighting when Ethernet is connected.
12. STA light: Flashing when data is transmitting.
15. Mode 2 light (Channel bit): Light on indicates channel adjustment is for high-bit channel, while light off indicates channel adjustment is for low-bit channel.
16. ID button: Click to switch channel ID, and long press to switch between high-bit and low-bit channel adjustment (lighting for mode 2).
17. Channel signal: The channel number is the sum of what the light-on signals represent.
18. Switch mode: Display the screen to WR with the same channel ID.
19. Splitter mode: Direct connection to WR for 1 to 1 extending display or 1 to N multicast. No channel ID should be set.

* Channel adjustment

- **Low-bit channel 1-15:** Click ID button to switch channel from 1 to 15.



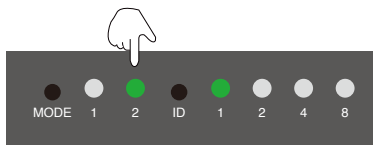
- Advanced section for more channels

In complex circumstances that 15 low-bit channels are not enough, with high-bit channel adjustment, up to 255 channels are provided. The channel ID more than 15 is “high bits * 16 + low bits”.

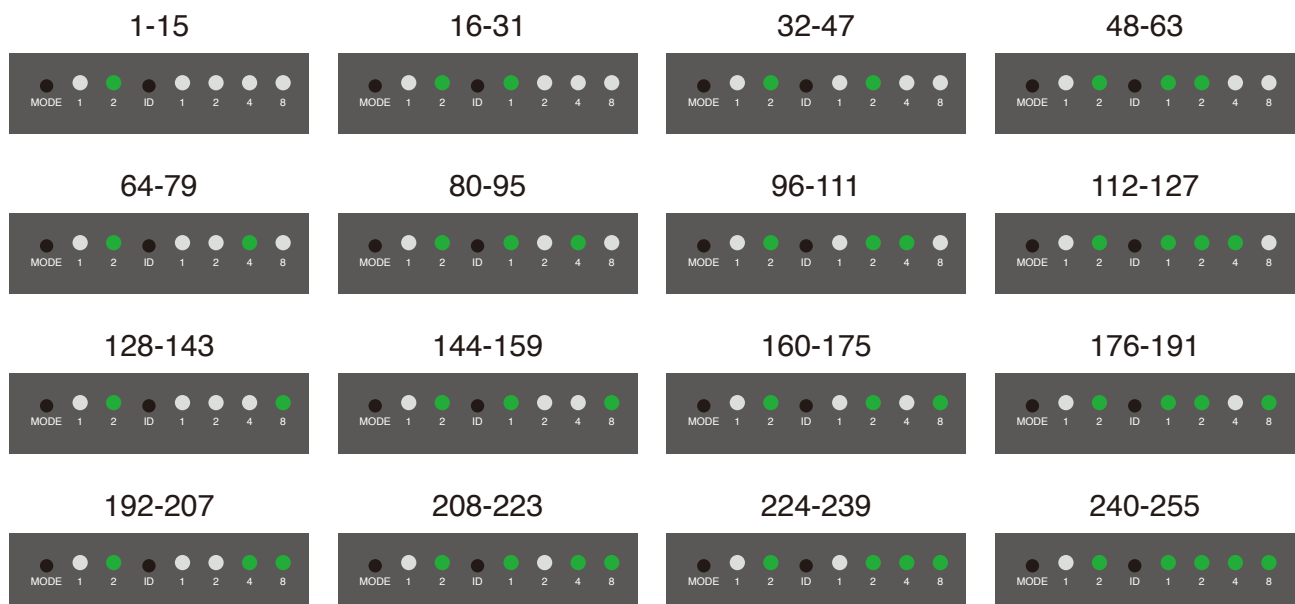
1. High-bit channel adjustment

- (1) Long press ID button to light on Mode 2 signal for adjusting high-bit channel.
- (2) Click ID button to change high-bit channel, which defines the adjustment range of low-bit signals.

High-bit adjustment



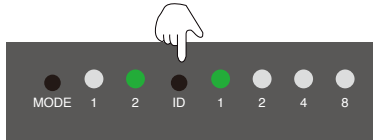
High-bit signals define the adjustment range of low-bit signals



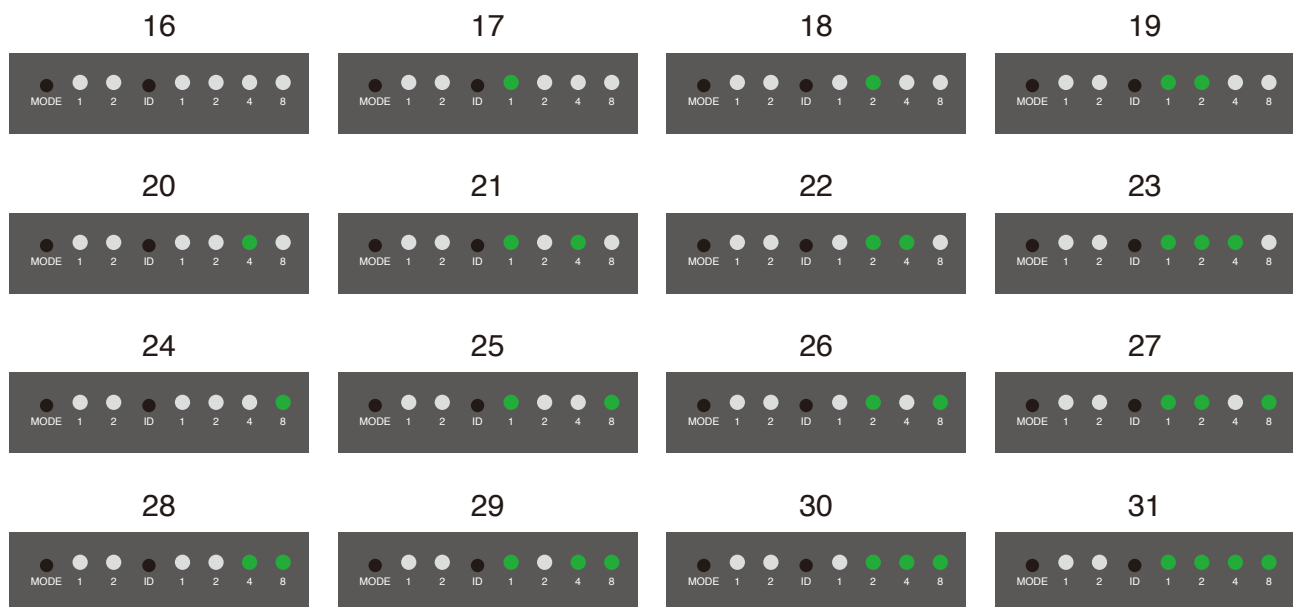
2. Example for channel 16-32:

- (1) Long press ID button to light on Mode 2 signal to adjust high-bit channel.
- (2) Click ID button to 1. High-bit channel 1 defines the low-bit channel adjustment starting from channel 16 (high bits * 16). (High-bit channel 2 defines low-bit channel adjustment starting from 32. So as high-bit channel 3-15 adjust low-bit channel from 46-255.)
- (3) Long press ID button again to switch back to low-bit adjustment.
- (4) Click ID button to switch channel from 16-32.

To start low-bit channel from 16-31, switch to high-bit adjustment and press ID button to 1.



Switch back to low-bit adjustment and change channel ID by ID button



Note: Only channel 1-15 are adjustable when high-bit channel is 0, not allowing the adjustment of high-bit channel 0 and low-bit channel 0 simultaneously.

*RS232 definition

Three pins of RS232 port from left to right are TX, Ground, and RX respectively.

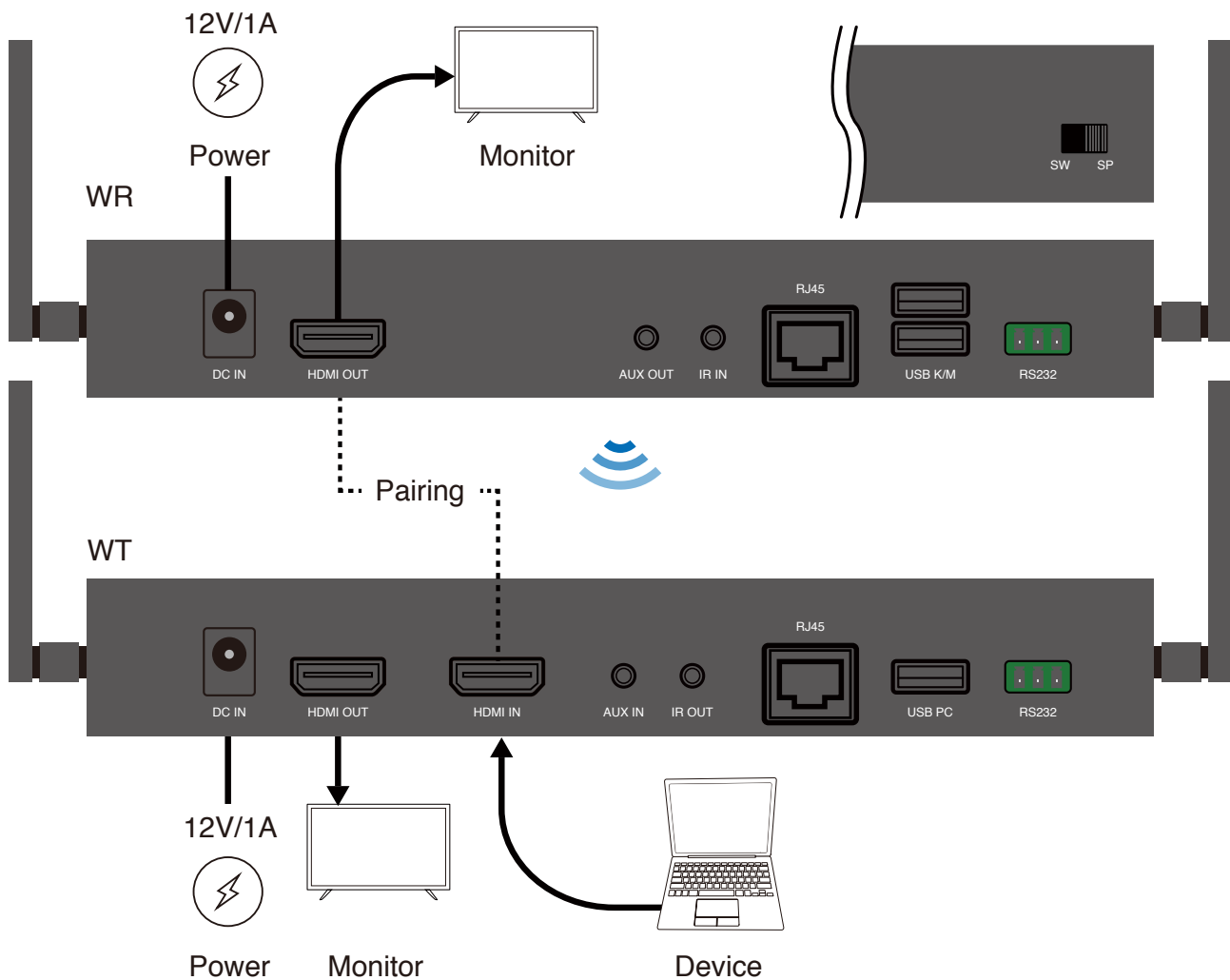


TX GND RX

3-2. Hardware Installation for WR/ WT

3-2-1. Splitter Mode Display (1 to 1):

1. Position the toggle switch to Splitter Mode on both WR and WT.
2. Connect power to 12V/1A and a monitor to display output on WR.
3. Connect WR01 and WT by the HDMI cable to pair. The STA signals keep flashing until pairing completed.
4. After pairing, connect power to 12V/1A, a monitor for loopback, and a device to input on WT.

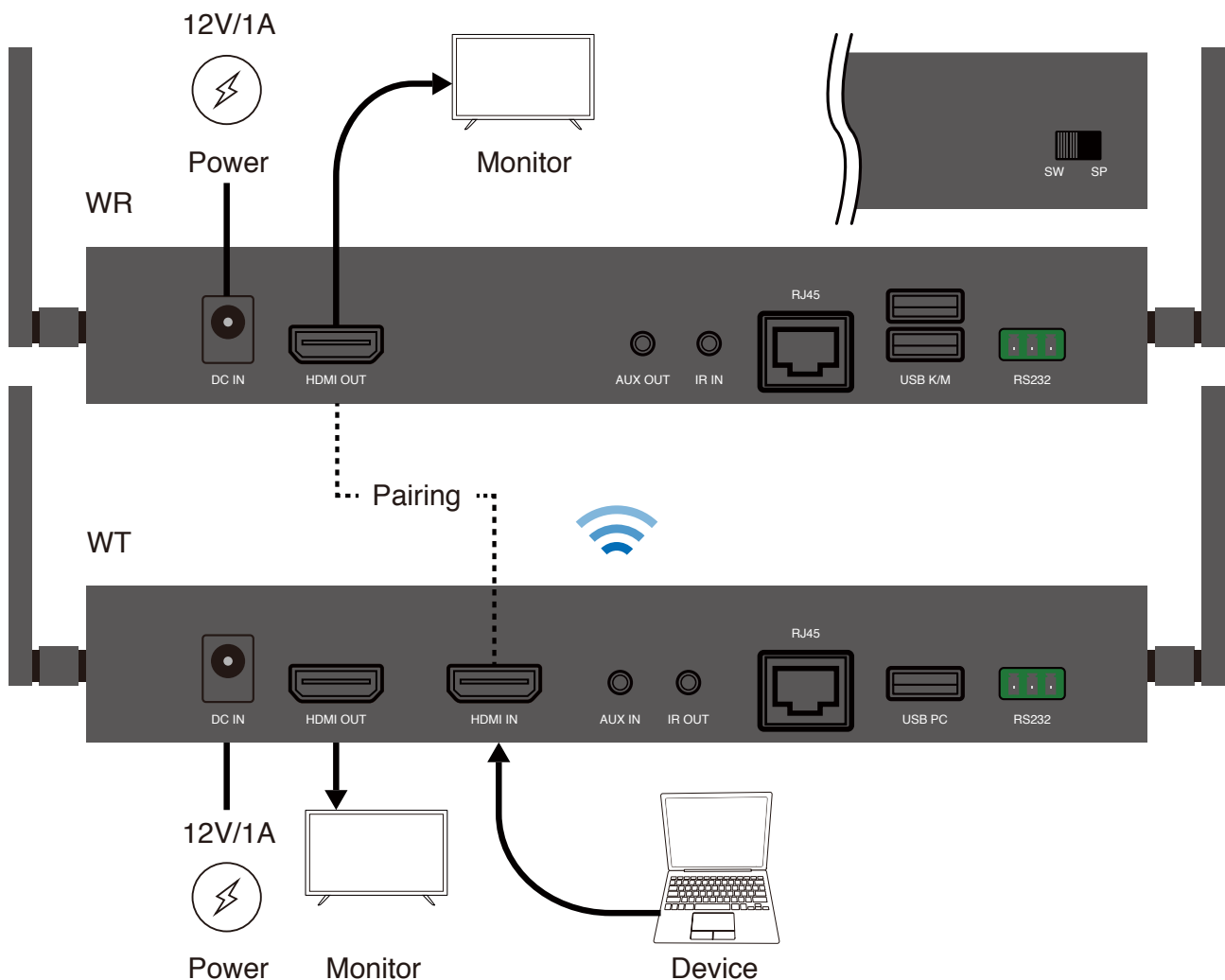


*** Troubleshooting guide:** If there's no signal on the monitor connected to WR, please make sure WR and WT (1) are both switched to Splitter mode and (2) have been paired together.

3-2-2. Switch Mode Display (1 to 1, N to 1):

1. Position the toggle switch to Switch Mode on both WR01 and WT.
2. Connect power to 12V/1A and a monitor to display output on WR.
3. Connect WR and WT by the HDMI cable to pair. The STA signals keep flashing until pairing completed.
4. After pairing, connect power to 12V/1A, a monitor for loopback, and a device to input on WT.
5. Set WR and WT to the same channel ID.

* Note: Every WT under the same network should be set to different channel ID.



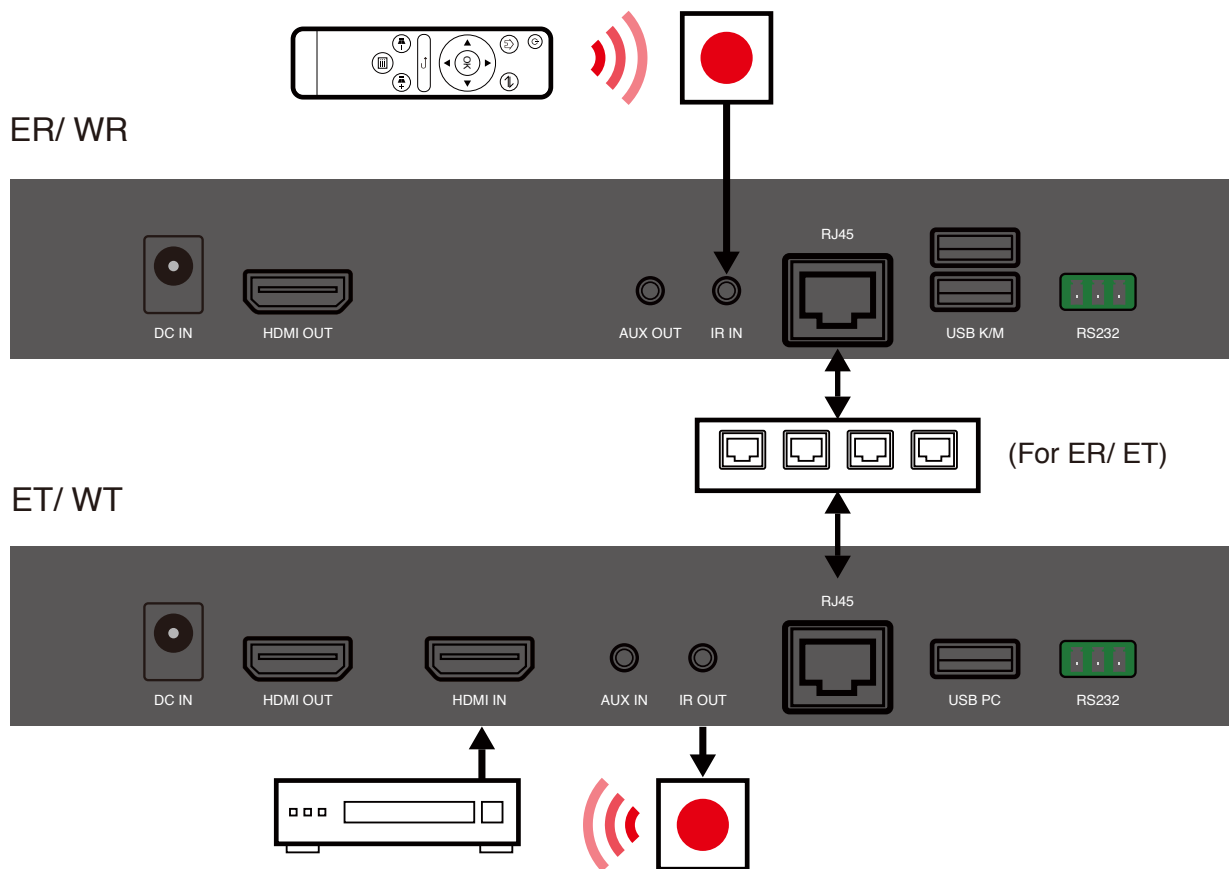
* **Troubleshooting guide:** If there's no signal on the monitor connected to WR, please make sure WR and WT (1) are both switched to Switch Mode, (2) have been paired together, and (3) are set to the same channel ID.

3-3. Installation of Remote Control

Three methods for remote control are supported: IR control, USB Keyboard/ Mouse control, and RS232 connection. The connection examples below are only for the remote control function, please arrange other display kits depending on your needs.

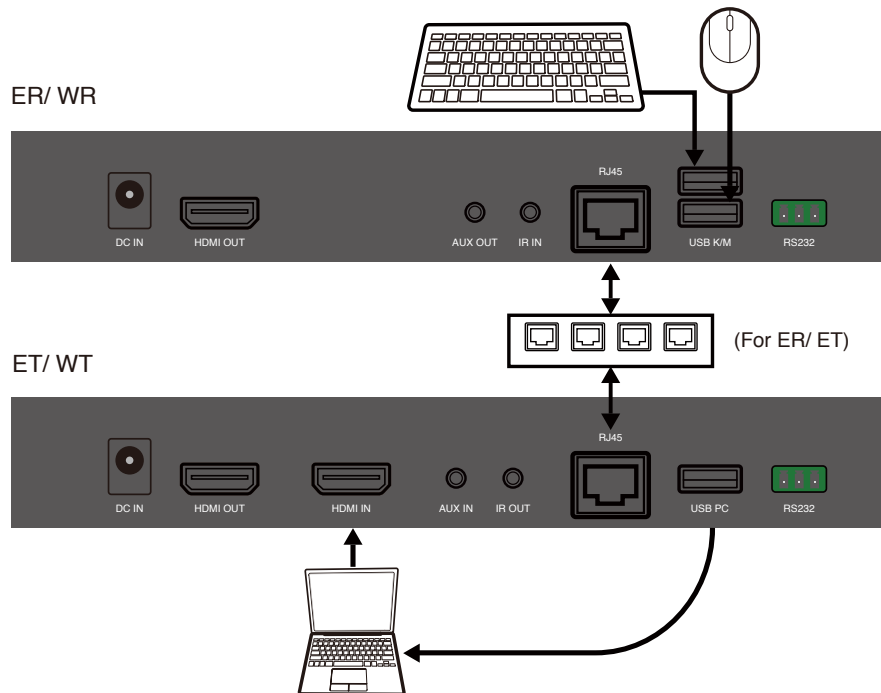
3-3-1. IR control:

Equip IR adapter on receiver and transmitter to control the device connected to ET/ WT from ER/ WR. The receiver is for IR input and the transmitter is for IR output.



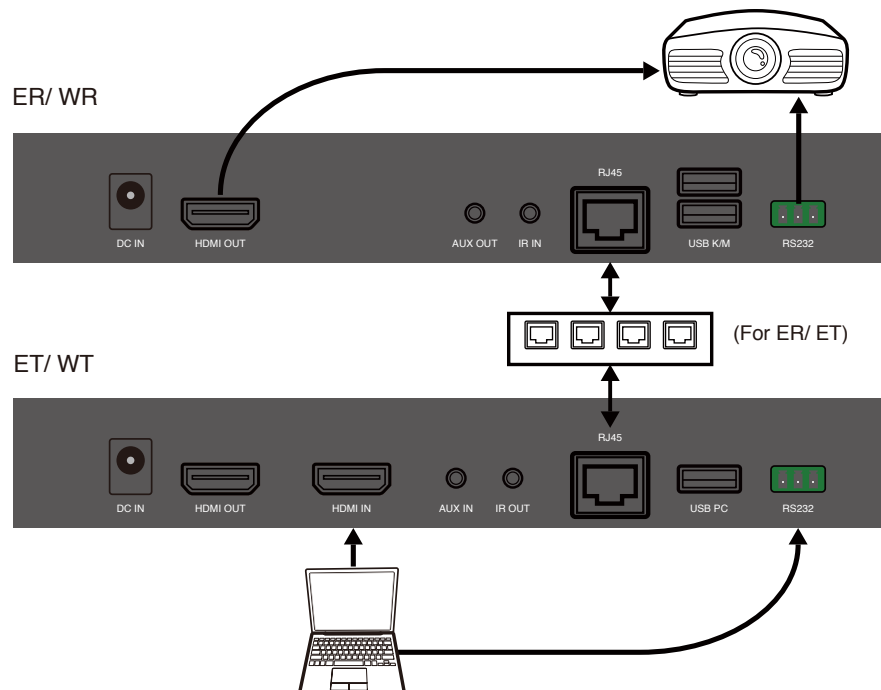
3-3-2. USB Keyboard/ Mouse control:

Connect keyboard/ mouse to ER/ WR to reverse control the computer connected to ET/ WT via USB cable. The receiver is for keyboard/ mouse input and the transmitter is for PC reverse control output.



3-3-3. RS232 connection:

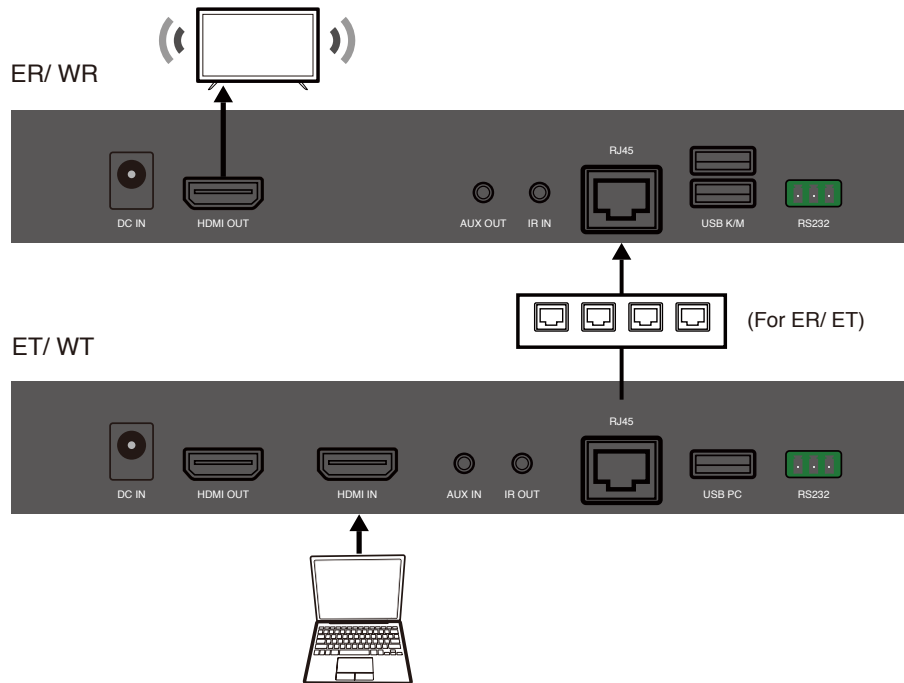
RS232 port allows both input and output signal transition, which makes it possible to monitor and to remote control from the receiver or from the transmitter. The example below is to remote the projector connected to receiver from the transmitter via RS232.



3-4. Installation of Audio Input and Output

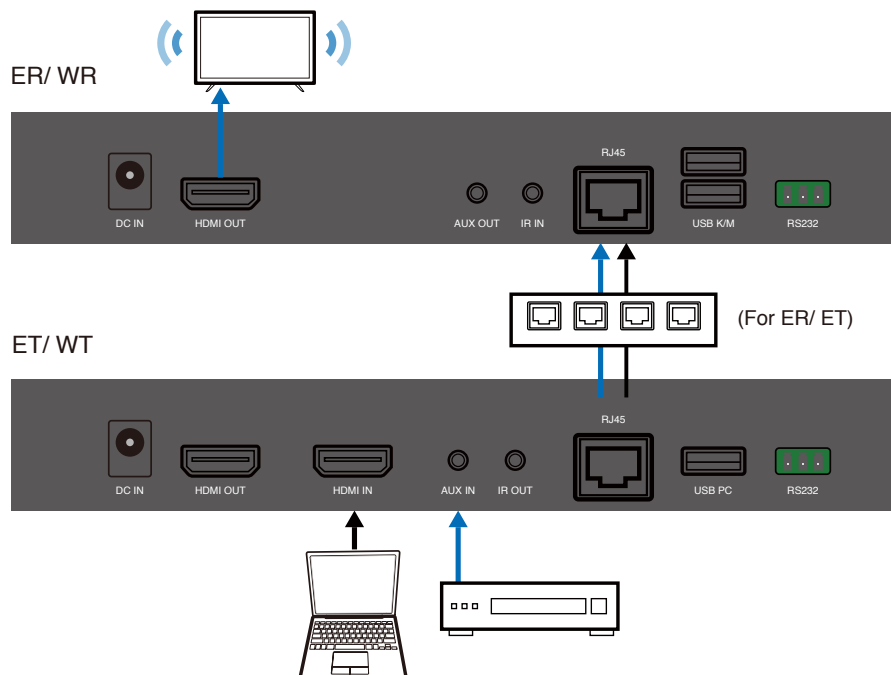
3-4-1. HDMI input and HDMI output

Input an audio source from HDMI port of the transmitter and output to HDMI port of the receiver.



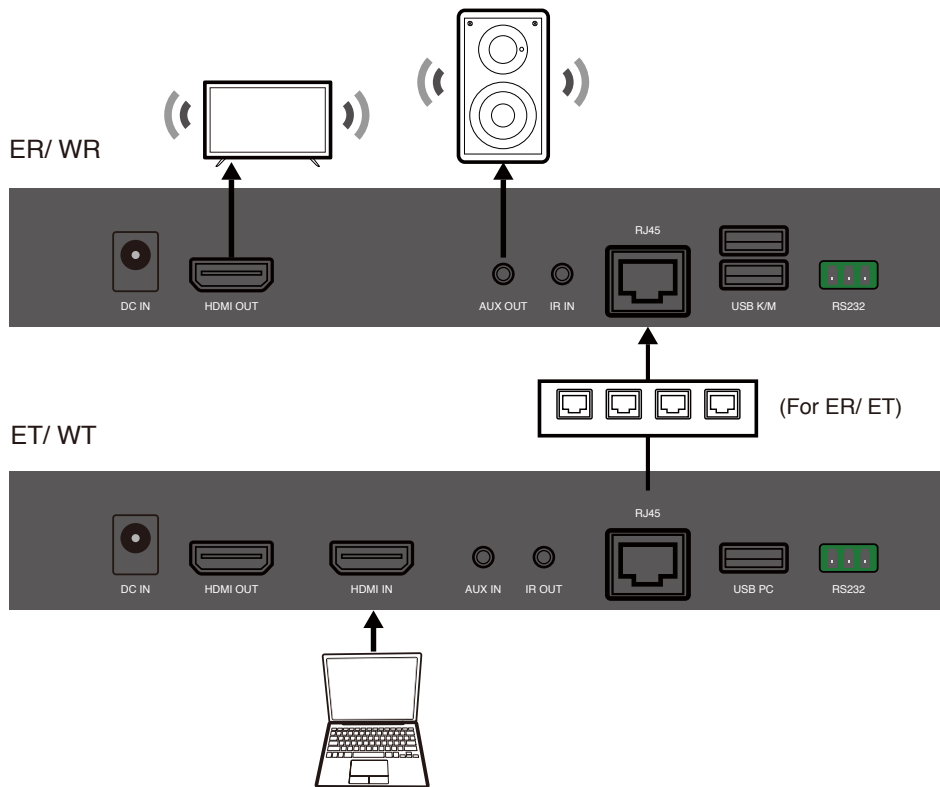
3-4-2. AUX input and HDMI output

Input audio sources from both HDMI and AUX port of the transmitter, but only that of AUX port output to the receiver.



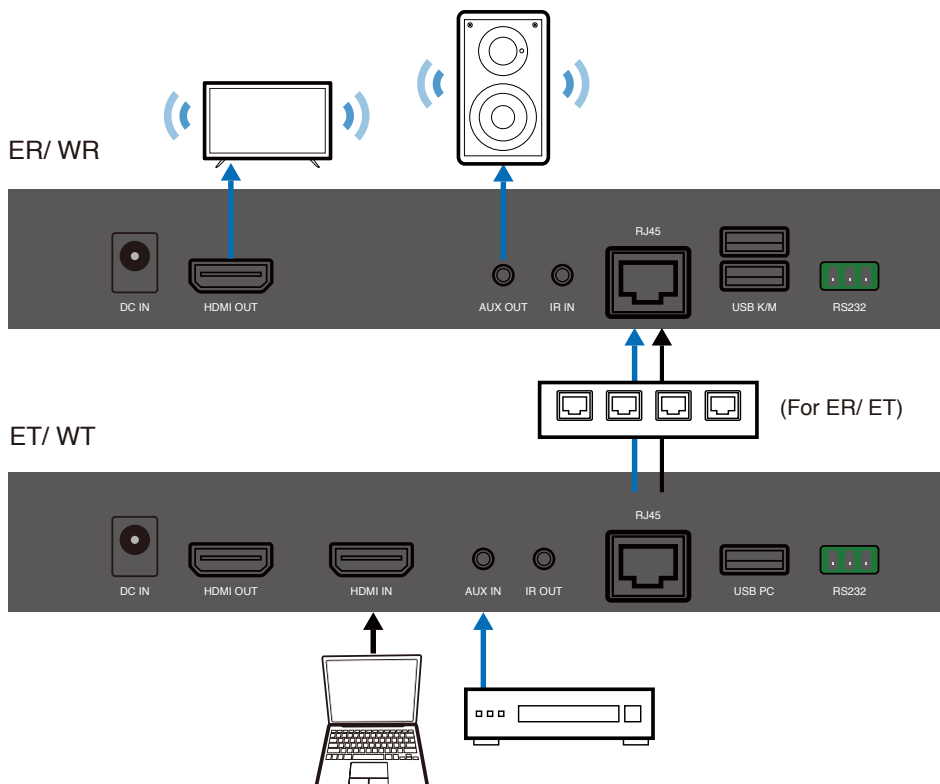
3-4-3. HDMI input and HDMI/ AUX output

Input an audio source from HDMI port of the transmitter and output from both HDMI and AUX port of the receiver when both ports are connected to the speakers.



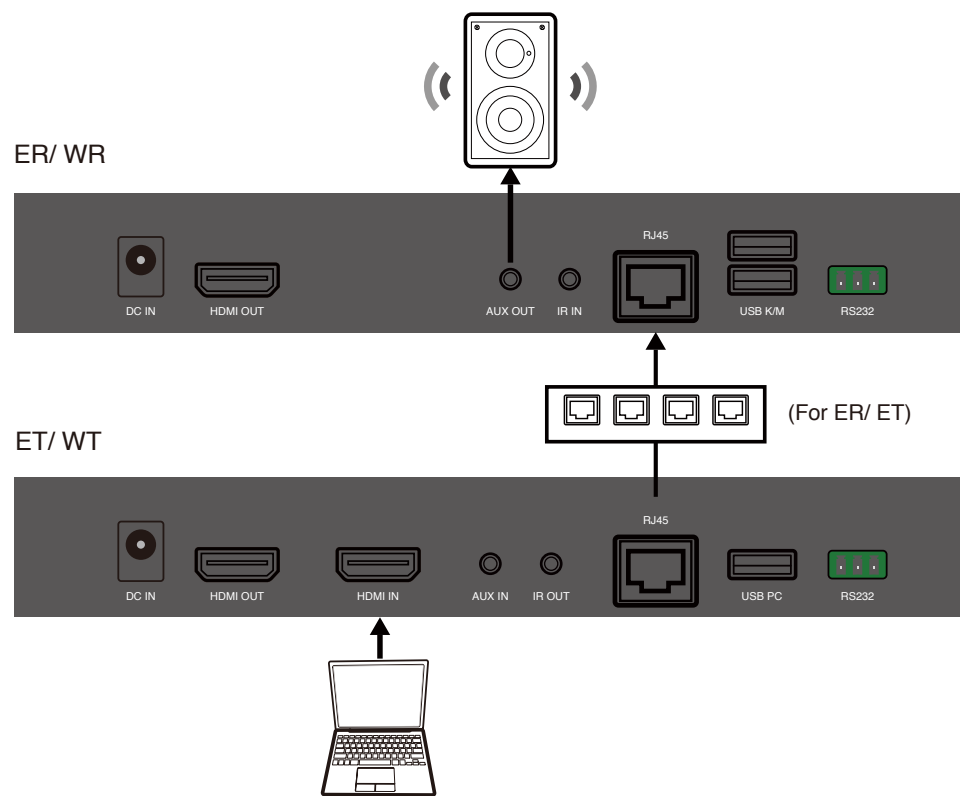
3-4-4. HDMI/ AUX input and HDMI/ AUX output

When inputting audio sources from both HDMI and AUX port of the transmitter and connecting output devices from both HDMI and AUX port of the receiver, only the audio from AUX input of the transmitter will output to both HDMI and AUX port of the receiver.



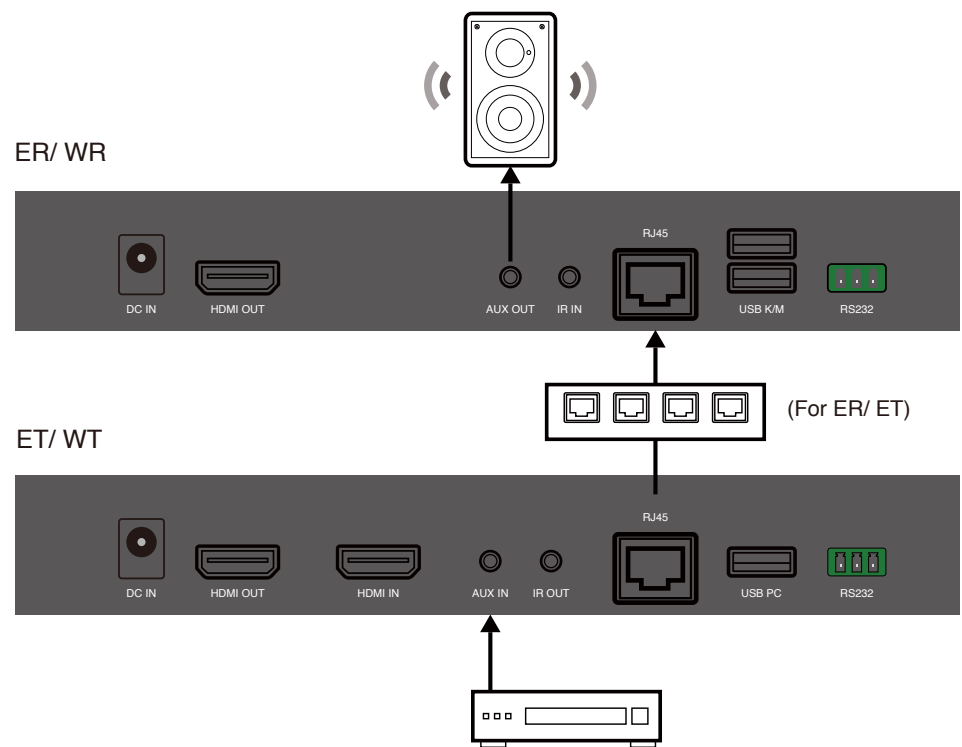
3-4-5. HDMI input and AUX output

Input an audio from HDMI port of the transmitter and output to AUX port of the receiver.



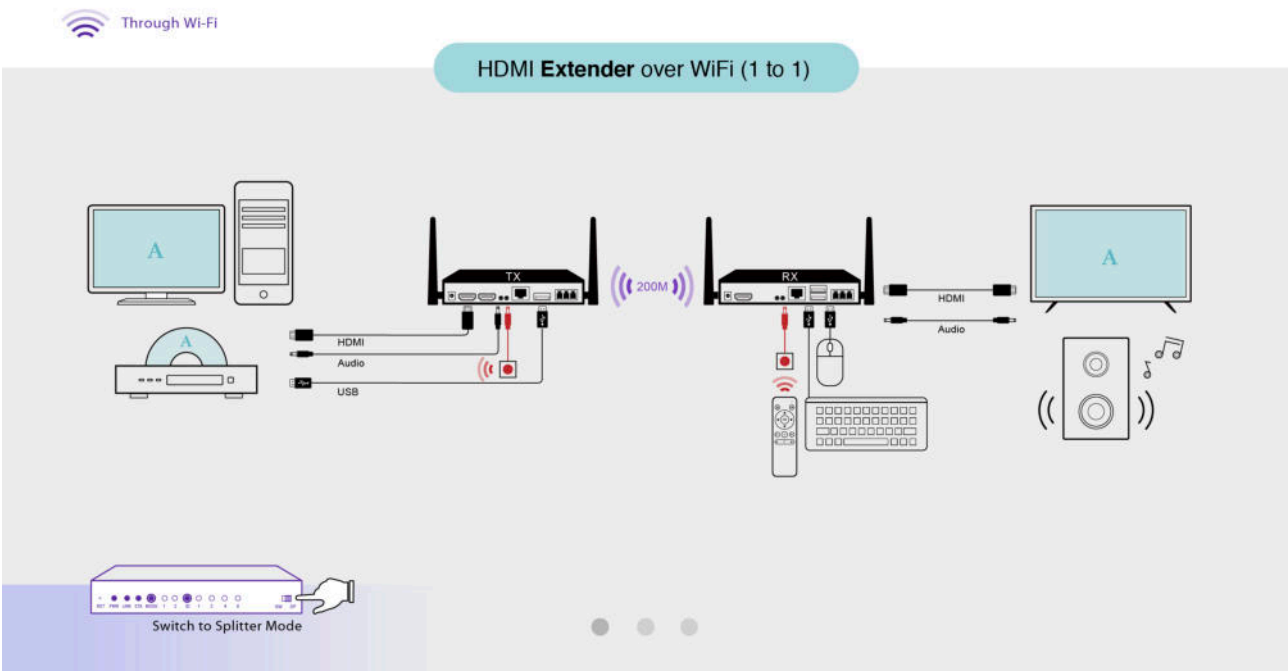
3-4-6. AUX input and AUX output

Input an audio from AUX port of the transmitter and output to AUX port of the receiver.

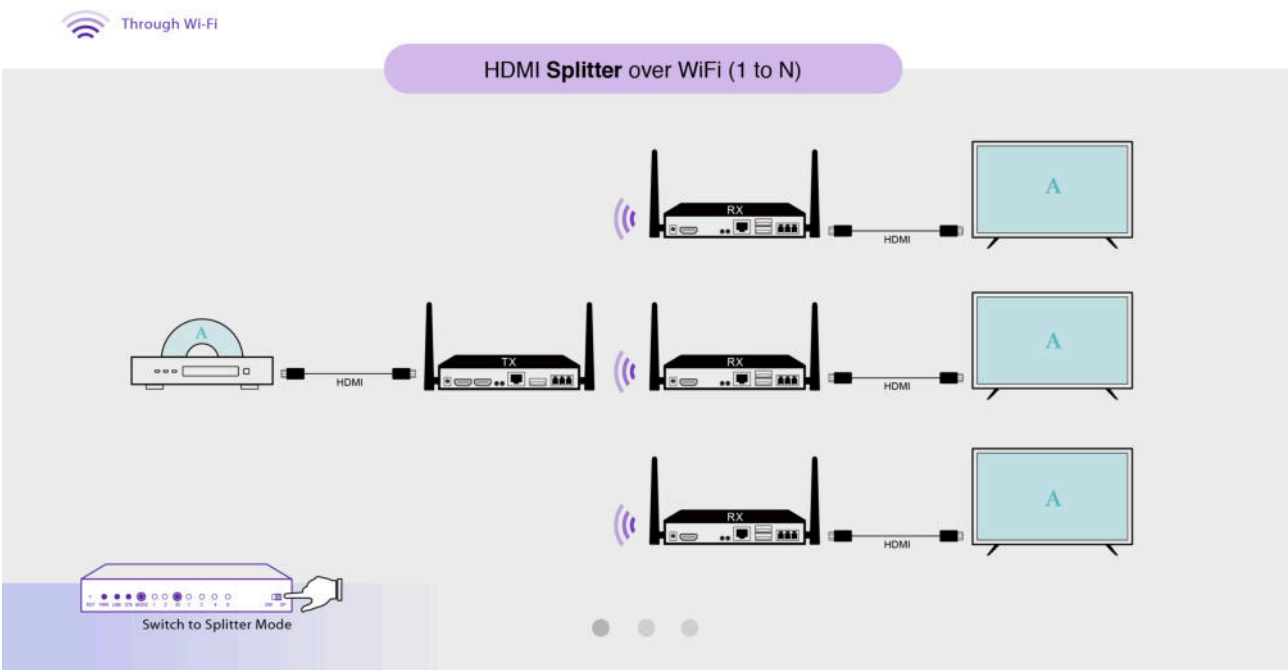


4-2. HDMI over Wi-Fi (WR/ WT)

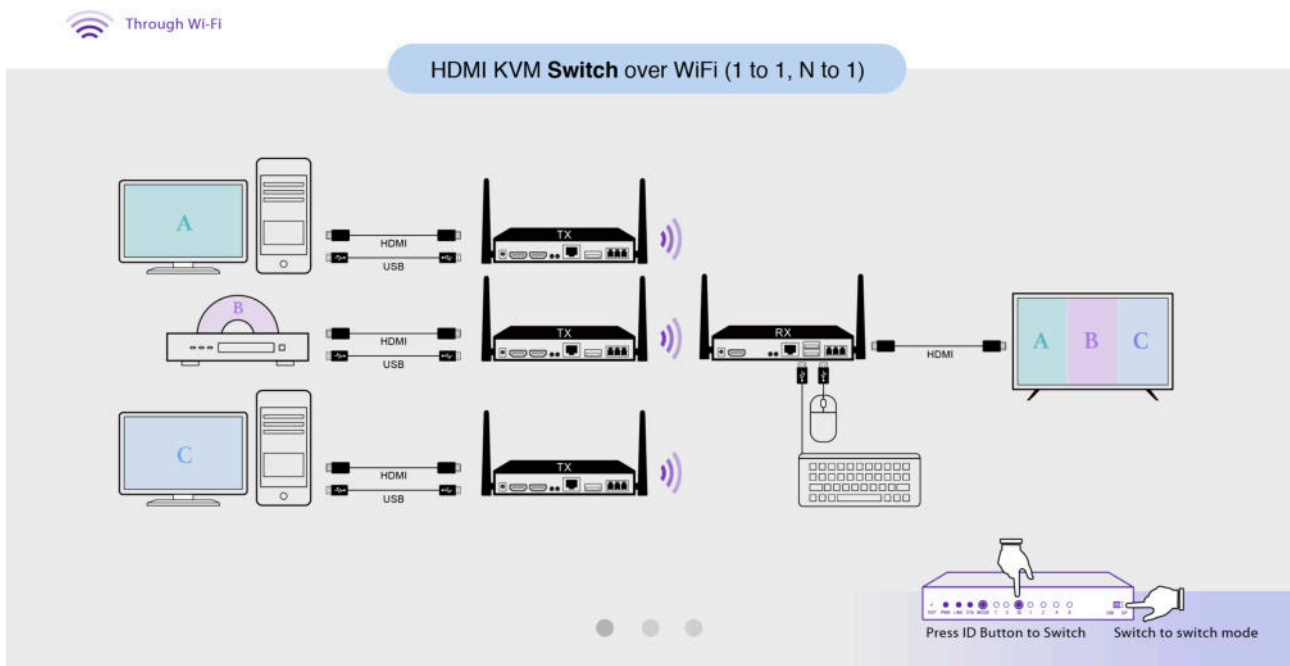
4-2-1. Extender (1 to 1)



4-2-2. Splitter (1 to N)



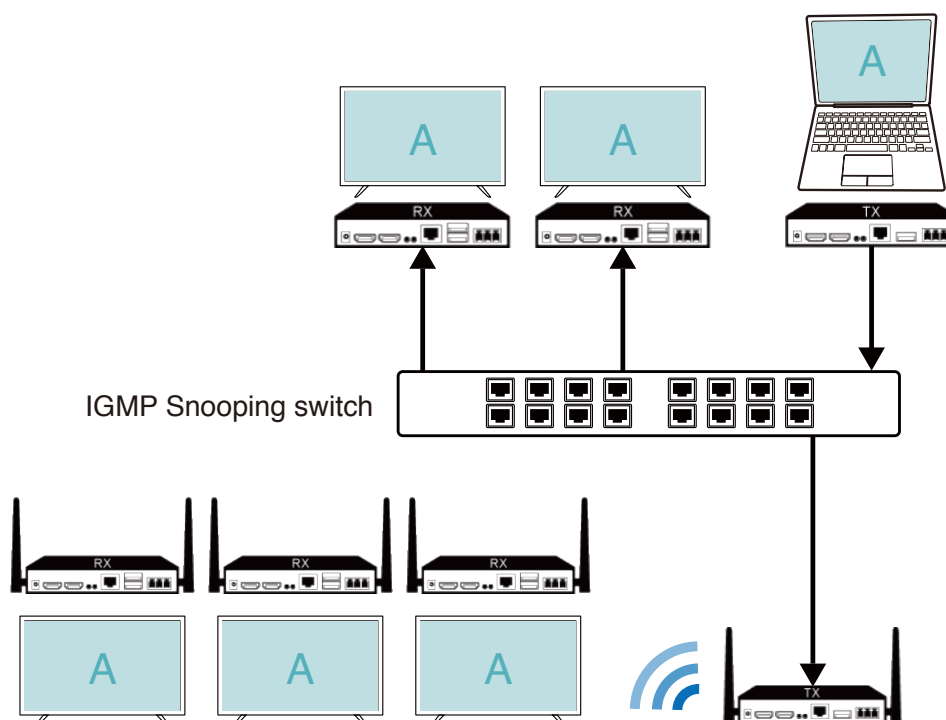
4-2-3. Switcher (1 to 1, N to 1)



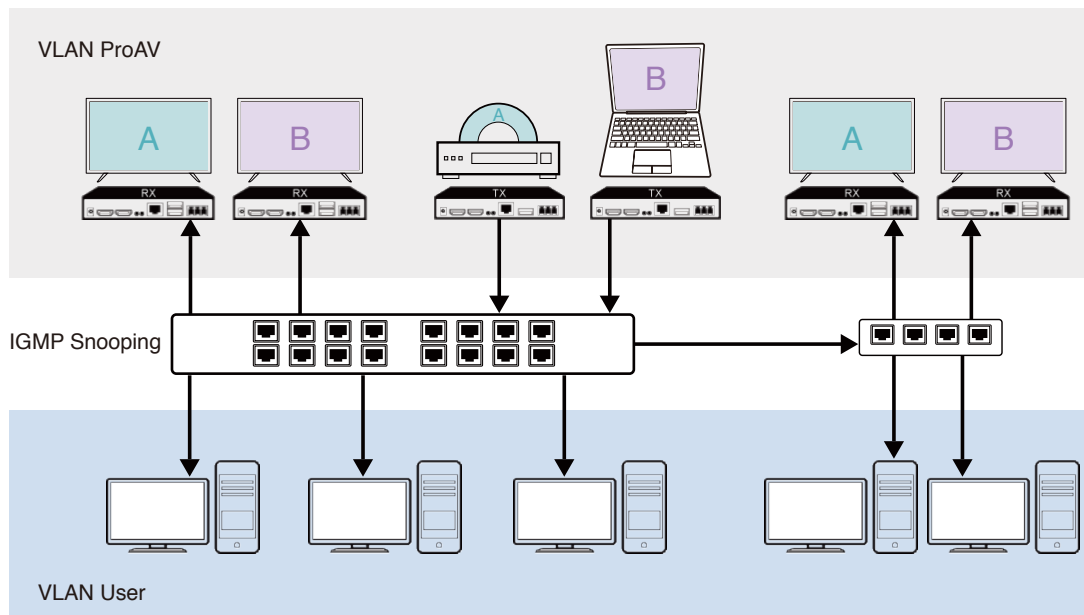
4-3. Switch/ Router configuration for EZCast ProAV

EZCast ProAV system transmits data in multicast traffic to allow streaming multiple multimedia to specific recipients at the same time. However, multicast traffic may flood the ports and slow your network, even if your device is connected to a particular port that doesn't need the service. To prevent the effect of low bandwidth transmission upon your current enterprise network environment, there are some suggested solutions below:

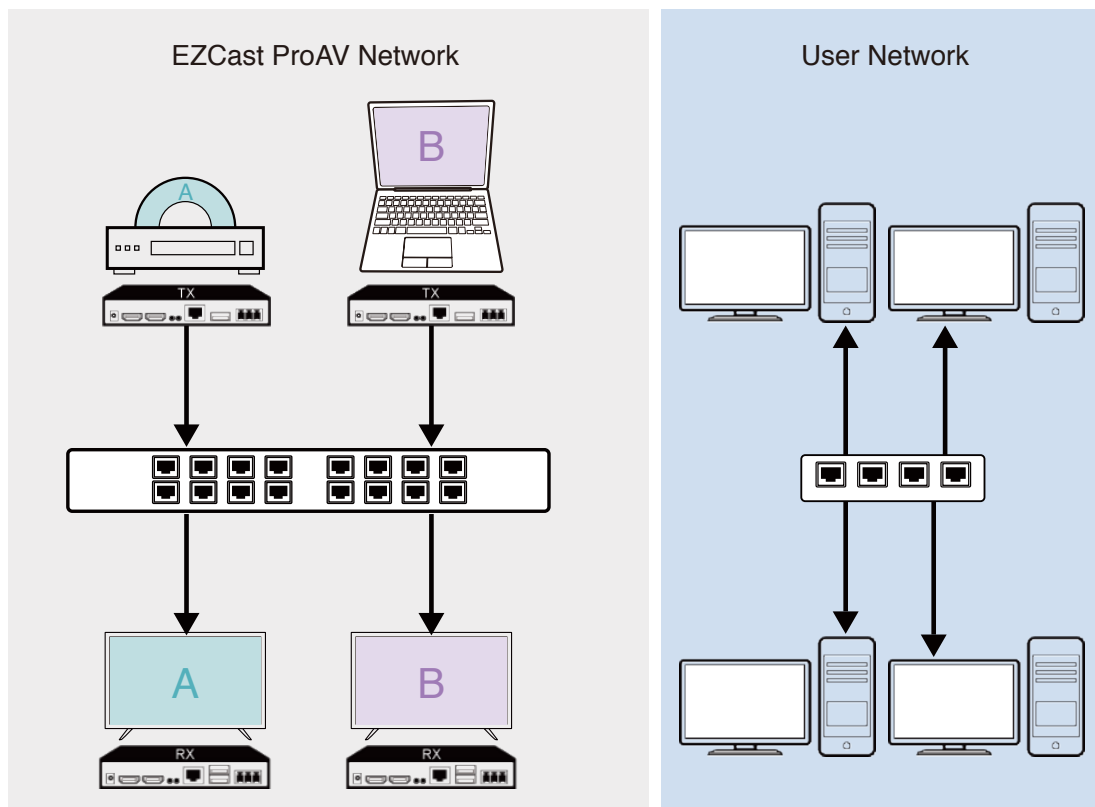
1. Enable Internet Group Management Protocol (IGMP) snooping service on your switch.



2. Set different VLAN ID of network ports connected to EZCast ProAV from your current devices.



3. Establish a dependent network environment for EZCast ProAV to avoid the flooding.



*** Troubleshooting guide:**

Unable to transmit data among EZCast ProAV: Please make sure to unblock the TCP/UDP port access in the firewall settings of your network.

5. Settings

5-1. Settings

Only receivers WR support settings on website. Connect your computer to the same network as the receivers and login as Admin to access the settings.

5-1-1. How to launch the settings

- WR

1. Connect WR with LAN cable to a subnet.
2. Launch the browser from PC connecting to the same subnet with WR.
3. Get the IP from the OSD (ex: Infrastructure IP: 192.168.0.123) and input in the address field of browser to launch.

5-1-2. Setting contents

-WR

1. Device Management: Language settings.
2. Admin Settings: Login as Admin to access.
 - Wi-Fi Channel: Set your country, channel, and bandwidth of the device.
 - Admin Password: The default admin password is 000000. Please enter and change the admin password at the first time. Whenever logged in as Admin, admin password is changeable.
 - HDCP Pass Through: Enable HDCP encryption based on the request from HDMI source (PC or DVD player).
 - Upgrade: Upgrade firmware of device from the Internet when the device is connected to the Internet.
 - Reboot: Reboot the device.
 - Reset to Factory Default: Reset all the settings to default.
3. About Device: Detail information of WR and the paired WT with the same channel ID.

5-2. Firmware Upgrade (OTA)

5-2-1. WR/ WT Upgrade

1. Launch the web settings and login as Admin.
2. Make sure WR has been connected to the Internet.
3. Click “Upgrade” to check the latest version and to upgrade firmware of WR and WT01.
Note that there’s no settings page for WT, please upgrade WT from the paired WR with the same toggle switch mode and the same channel ID.

* **Troubleshooting guide:**

Unable to upgrade WT: Access the upgrading command from the settings page of WR connected to the same network. Please make sure WT and WR (1) are both switched to the Switch Mode, (2) have been paired together, and (3) are set to the same channel ID.

Appendix

Support list of display input		4K Model
TX HDMI input and RX HDMI output		1.11534.0
TX HDMI input	RX HDMI output	HDMI loopback output
640x480 60Hz	800x600 60Hz	640x480 60Hz
800x600 60Hz	800x600 60Hz	800x600 60Hz
1024x768 60Hz	1024x768 60Hz	1024x768 60Hz
1280x720 60Hz	1280x720 60Hz	1280x720 60Hz
1280x720 50Hz	1280x720 60Hz	1280x720 50Hz
1280x768 60Hz	1280x768 60Hz	1280x768 60Hz
1280x800 60Hz	1280x800 60Hz	1280x800 60Hz
1280x960 60Hz	1280X960 60Hz	1280x960 60Hz
1280x1024 60Hz	1280x1024 60Hz	1280x1024 60Hz
1360x768 60Hz	1920x1080 60Hz	1360x768 60Hz
1400x1050 60Hz	1400x1050 60Hz	1400x1050 60Hz
1440x900 60Hz	1440x900 60Hz	1440x900 60Hz
1920x1200 60Hz	1920x1200 60Hz	1920x1200 60Hz
1600x1200 60Hz	1600x1200 60Hz	1600x1200 60Hz
1680x1050 60Hz	1680X1050 60Hz	1680x1050 60Hz
1920x1080 60Hz	1920x1080 60Hz	1920x1080 60Hz
1920x1080i 60Hz	1920x1080 60Hz	1920x1080i 60Hz
1920x1080 50Hz	1920x1080 60Hz	1920x1080 50Hz
1920x1080i 50Hz	1920x1080 60Hz	1920x1080i 50Hz
3840X2160 60Hz	3840X2160 30Hz	3840X2160 60Hz
4096X2160 60Hz	4096X2160 30Hz	4096X2160 60Hz

Support list of display input		1080P Model
TX HDMI input and RX HDMI output		1.11194.0
TX HDMI input	RX HDMI output	HDMI loopback output
640x480 60Hz	800x600 60Hz	800x600 60Hz
800x600 60Hz	800x600 60Hz	800x600 60Hz
1024x768 60Hz	1024x768 60Hz	1024x768 60Hz
1280x720 60Hz	1280x720 60Hz	1280x720 60Hz
1280x720 50Hz	1280x720 60Hz	1280x720 60Hz
1280x768 60Hz	1280x768 60Hz	1280x768 60Hz
1280x800 60Hz	1280x800 60Hz	1280x800 60Hz
1280x960 60Hz	1280x960 60Hz	1280x960 60Hz
1280x1024 60Hz	1280x1024 60Hz	1280x1024 60Hz
1360x768 60Hz	1920x1080 60Hz	1920x1080 60Hz
1400x1050 60Hz	1400x1050 60Hz	1400x1050 60Hz
1440x900 60Hz	1440x900 60Hz	1440x900 60Hz
1920x1200 60Hz	1920x1200 60Hz	1920x1200 60Hz
1600x1200 60Hz	1600x1200 60Hz	1600x1200 60Hz
1680x1050 60Hz	1680x1050 60Hz	1680x1050 60Hz
1920x1080 60Hz	1920x1080 60Hz	1920x1080 60Hz
1920x1080i 60Hz	1920x1080 60Hz	1920x1080 60Hz
1920x1080 50Hz	1920x1080 60Hz	1920x1080 60Hz
1920x1080i 50Hz	1920x1080 60Hz	1920x1080 60Hz

* The blue marks the difference with TX HDMI input but is the same as RX HDMI output.