ST-WL4K-98

HDMI 4K over Wireless 60G Extender

User Manual

Rev 10/11/21

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.

Table of Contents

1. Introduction

The HDMI 4K over wireless 60G extender can transmit 4K content without any compression and latency to an HDMI display up to 30 meters. It also supports 3D, CEC and 7.1-channels of High Bit Rate (HBR) lossless digital audio such as Dolby TrueHD, DTS-HD Master Audio. The Wireless HD is specifically designed to transmit high definition video & audio within one room.

2. Features

☆ HDMI 1.4, HDCP 2.2 compliant
☆ Up to 4K(3840x2160)@30Hz, 1080P@60Hz
☆ Up to 7.1 channels HD audio
☆ Uncompressed 4K Video & Audio
☆ Near zero latency
☆ Wireless extension up to 30 meters
☆ Simply plug-and-play for easy connection
☆ Supports CEC

3. Package Contents

① 1× HDMI 4K over Wireless 60G Transmitter
② 1× HDMI 4K over Wireless 60G Receiver
③ 1× User Manual
④ 2× 5V/1A USB adapter
⑤ 2× USB Type A to Micro-B Cable

4. Specifications

Technical	
Frequency Band Range	60 GHz
Maximum Video Resolution Supported	up to 4K (3840x2160)@30Hz
Color Depth	up to 12-bit color (36-bit deep color)
Input Ports(Transmitter)	1x HDMI (Female type)
Output Ports(Receiver)	1x HDMI (Female type)
USB Connector (Power) (Transmitter/ Receiver)	USB Micro-B
ESD Protection	±8kV (Air-gap discharge) , ±4kV (Contact discharge)
Power Supply	5V/1A DC
Dimensions (WxDxH)	3.54 x 2.2 x 0.67 in. (90×56×17mm)
HDMI Audio Formats	LPCM, Dolby Dgital, Dolby Digital Plus, Dolby TrueHD, DTS-HD Master Audio
HDMI Compliance	HDMI 1.4
HDCP Compliance	HDCP 2.2
Operating Temperature	0°C ~ 40°C / 32°F ~ 104°F
Storage Temperature	-20°C ~ 60°C / -4°F ~ 140°F
Relative Humidity	20~90% RH (non-condensing)
Power Consumption	Transmitter: 4.15W , Receiver: 4.15W

5. Operation controls and Functions

Transmitter Front View
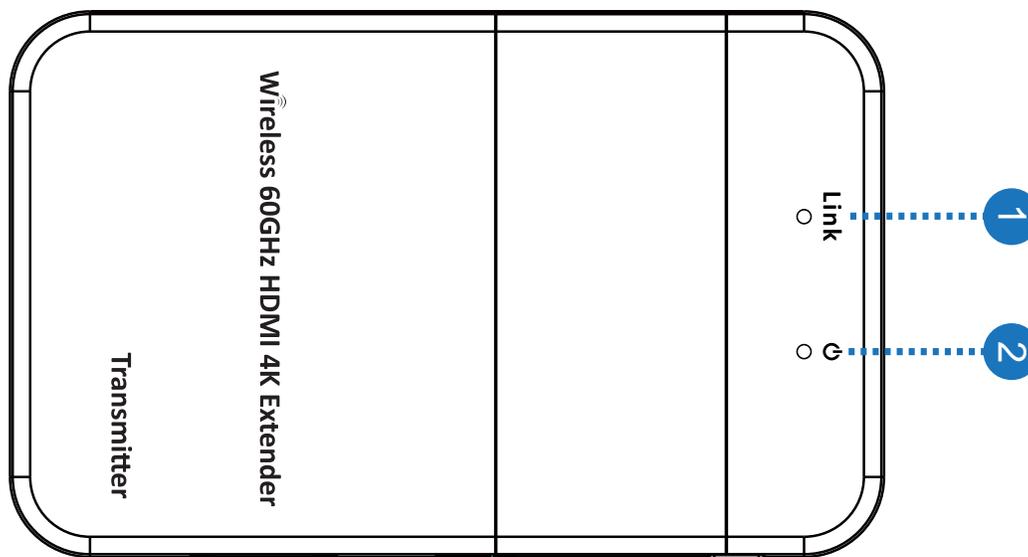
Receiver Front View
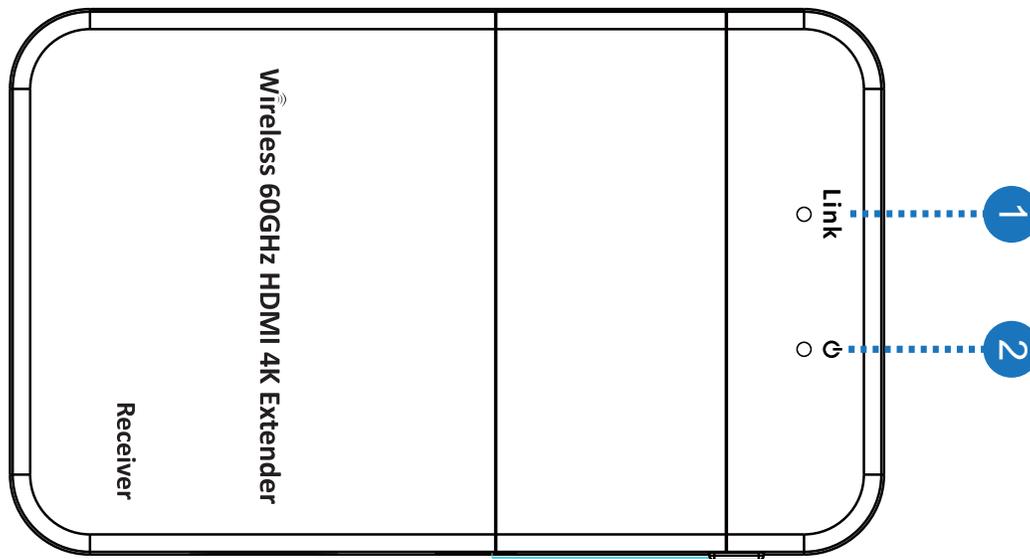
1.Link LED: The connection status indicating lamp.
- ◆ **LED OFF:** Means the adapter is powered OFF or in Sleep mode.
- ◆ **LED Slow Blink:** Means the adapter has started radio transmission and has not yet found the other side of the link:
 - ● If the adapter is a transmitter, the adapter is in Scan mode, searching for a matching receiver.
  - ● If the adapter is a Receiver, the adapter is in Beacon mode, searching for a matching transmitter.
- ◆ **LED Fast Blink:** Means the adapters are associated, which means that the receiver and transmitter have accepted each other and established a network.
- ◆ **LED ON:** Means the transmitter and receiver adapters have established an audio/video connection. At this point, the user should be able to see this transmission happening on the display attached to the receiver.

2.Power LED: Illuminates when power has been supplied to the unit.

Transmitter Rear Panel
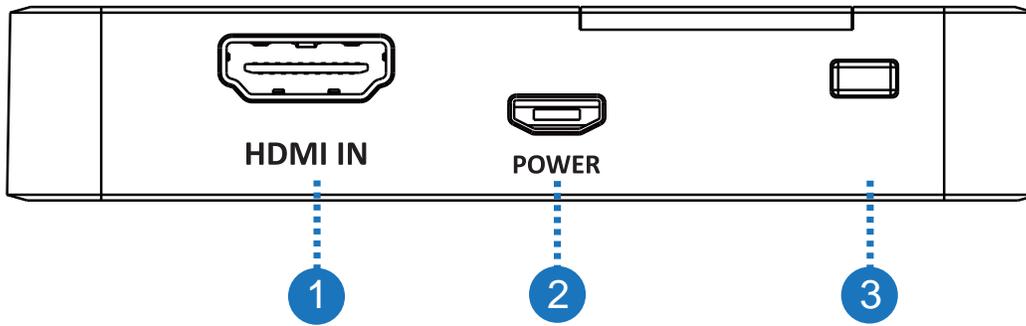
1. HDMI IN: This slot is where you connect the HDMI source.
2. POWER: Connect the USB Type A-to-Micro cable here. Connect the USB Type A to either the 5V DC power supply or connect to the video source USB port.

3. Button: This button has a variety of functions:
   Wakeup Function: If the adapter is in Sleep mode (Status LED is OFF and power supply is connected), momentarily pressing this button will wake up the adapter and start normal operation.
   Set to Factory Default Function: At any point, a long press (ten seconds) on the button will reset the adapter to factory defaults.
   Next Network Function: When the button is momentarily pressed on the transmitter side, the adapter will give up the current associated network (receiver) and will join the next available network (receiver).

   User Case Example: One transmitter is connected to a receiver attached to a display, while another TV is connected to another receiver in the room. The user wants to send the audio and video to the other display. To accomplish this, pressing the button of the transmitter will cause it to switch from its current TV display to the other display. Every time the user presses the button, the transmitter will attempt to connect to the next available receiver in the room. A maximum of ten receivers can be supported in the same room.

   Note: Pressing the button on the transmitter side will always interrupt the current audio/video connection such that the transmitter can search for another network, even if none are available. If only one network is available in the room, the transmitter will eventually return to its only network and restablish a video connection with it after finishing its search.

Receiver Rear Panel
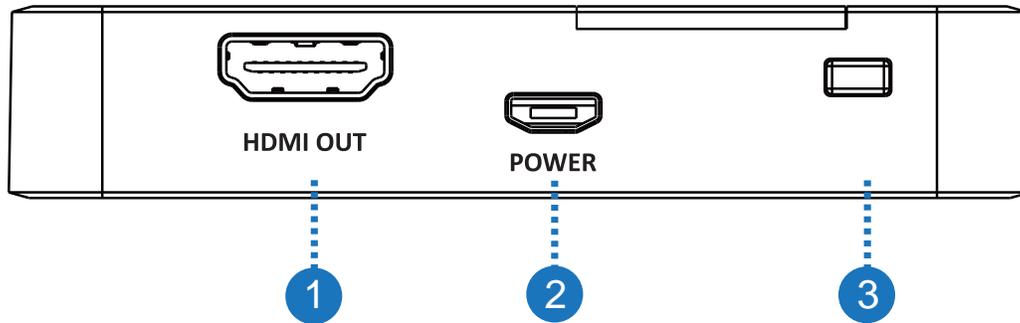
1. HDMI OUT: For connection of an HDMI-equipped TV or monitor.

2. POWER: Plug the 5V DC power supply into the unit or connect to the source USB port via USB to Micro-USB cable.

3. Button: The button has a variety functions.
Wakeup Function: If the adapter is in Sleep mode (Status LED is OFF and power supply is connected), pressing this button will wake up the adapter and start normal operation.
Set to Factory Default Function: At any point, a long press (ten seconds) on the button will reset the adapter to factory default.
Next Source Function: When the button is short pressed on the receiver side, and if other transmitter sources are available in its network, the receiver will give up the current video connection and connect with the next available source.
User Case Example: Two or more transmitters are in the room and are associated with one receiver attached to a display. The user is currently receiving video from one of the available sources, but wants to switch to another source. To accomplish this, pressing the button of the receiver will cause it to switch from its current audio/video source to the next available source. Every time the user presses the button, the receiver will attempt to connect to the next available transmitter in the room. A maximum of 16 transmitters can be supported in the network.
Note that pressing the button on the receiver will not interrupt the current audio/video connection if there is no other transmitter available in the network. In that particular case, the button will do nothing.

6. Supported Video and Audio Formats

Supported Video Formats

Resolution	Refresh Rates(Hz)	Color Depth(Color Depth (8, 10, 12 bits))
640 x 480p(VGA)	60	RGB 4:4:4 (8 bits)
848 x 480(WVGA)	60	RGB 4:4:4 (8 bits)
800 x 600 (SVGA))	60	RGB 4:4:4 (8 bits)
1024 x 768(XGA)	60	RGB 4:4:4 (8 bits)
1280 x 1024 (SXGA)	60	RGB 4:4:4 (8 bits)
1680 x 1050 (WSXGA+)	60	RGB 4:4:4 (8 bits)
1920 x 1200 (WUXGA)	60	RGB 4:4:4 (8 bits)
480i	60	RGB 4:4:4 (8/10/12 bits) YCbCr 4:4:4 (8/10/12 bits) YCbCr 4:2:2 (8 bits)
480p	60	RGB 4:4:4 (8/10/12 bits) YCbCr 4:4:4 (8/10/12 bits) YCbCr 4:2:2 (8 bits)
576i	50	RGB 4:4:4 (8/10/12 bits) YCbCr 4:4:4 (8/10/12 bits) YCbCr 4:2:2 (8 bits)
576p	50	RGB 4:4:4 (8/10/12 bits) YCbCr 4:4:4 (8/10/12 bits) YCbCr 4:2:2 (8 bits)
720p	50/60	RGB 4:4:4 (8/10/12 bits) YCbCr 4:4:4 (8/10/12 bits) YCbCr 4:2:2 (8 bits)
1080i	50/60	RGB 4:4:4 (8/10/12 bits) YCbCr 4:4:4 (8/10/12 bits) YCbCr 4:2:2 (8 bits)
1080p	24/50/60	RGB 4:4:4 (8/10/12 bits) YCbCr 4:4:4 (8/10/12 bits) YCbCr 4:2:2 (8 bits)
4K×2K (3840X2160)	24/30	RGB 4:4:4 (8 bits) YCbCr 4:4:4 (8 bits) YCbCr 4:2:2 (8 bits)

Supported 3D Formats

Type	Resolution	Refresh Rate(Hz)
Frame Packing	1080p	24
	720p	50/60
Top - Bottom	1080p	24
	720p	50/60
Side-by-Side	1080i	50/60

Supported Audio Formats

Format	Channel	Sampling Rates (KHz)
LPCM	2	32/44.1/48/88.2/96/176.4/192
LPCM	6/8	32/44.1/48/88.2/96
Dolby Digital	2/5.1	48
Dolby Digital Plus	2/5.1/6.1/7.1	48
Dolby TrueHD	5.1/6.1/7.1	48/96
DTS-HD Master Audio	5.1/6.1/7.1	48/96
DTS-HD Master Audio	2/5.1	192

7. Application Example