

# ST-WLHD-98

## HDMI Wireless Extender

### User manual



Thank you for purchasing this product. For optimum performance and safety, please read the instruction carefully before connecting, operating or adjusting this product. Please keep the manual for future reference.

## 1. Introduction

The ST-WLHD-98 Extender includes a Transmitter and Receiver. The extender system sends high definition video and audio to any HDTV display up to 30 meters away. It supports resolutions up to 1080p Full HD, 3DTV, CEC, and 7.1 channels of High Bit Rate (HBR) lossless digital audio such as Dolby TrueHD, DTS-HD Master Audio. The ST-WLHD-98 specifically designed to transmit within a room.

## 2. Features

- Supports video resolutions:
  - VGA through WUXGA
  - 480i/576i to 1080p@60Hz
  - 3D video support 1080p/720p
- WiHD 1.1 Compliant
- Compliant with HDMI1.4,HDCP2.0
- Supports Dolby TrueHD, DTS-HD Master Audio and LPCM digital audio streams up to 7.1channels
- Uncompressed High Definition A/V from source to display
- Near zero latency (<1ms)
- Wireless extension of HDMI up to 30 meters
- Support for CEC commands
- Support for HDR

## 3. Package

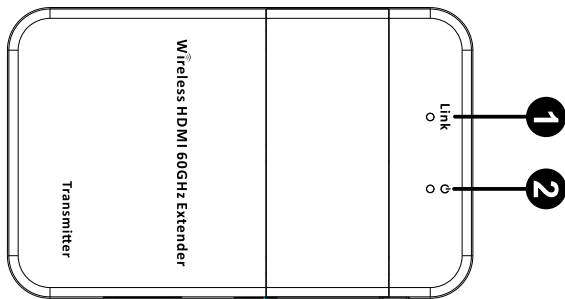
1. Wireless 60G HD Transmitter (ST-WLHD-L-98)----- 1PCS
2. Wireless 60G HD Receiver -(ST-WLHD-R-98)----- 1PCS
3. 5V/1A USB adaptor ----- 2PCS
4. USB to Micro-USB Cable-----2PCS

#### 4. Specifications

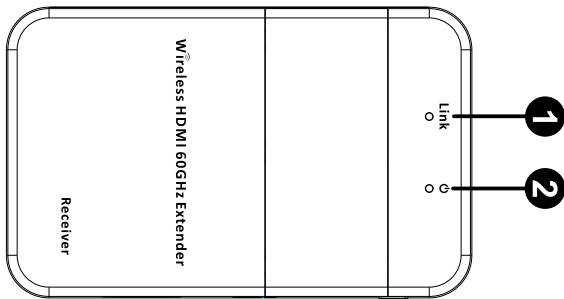
Frequency Band Range::	60 GHz
Input resolution (Transmitter):	up to 1080P@60Hz
Output resolution (Receiver):	up to 1080P@60Hz
Input ports (Transmitter):	1x HDMI (Female type)
Output ports (Receiver):	1x HDMI (Female type)
USB Connector (Transmitter/ Receiver):	Micro USB
Dimensions (mm):	90(W) x 56(D) x 17(H)
Wight (g):	Transmitter (155g) Receiver (153g)
Operating Temperature:	0°C ~ 40°C / 32°F ~ 104°F
Storage Temperature:	-20°C ~ 60°C / -4°F ~ 140°F
Humidity:	20 ~ 90% RH (Non-condensing)
Power Consumption (Max):	3.5W

#### 5. Operation controls and Functions

##### Transmitter Front View



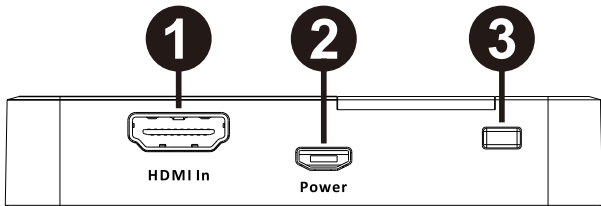
## Receiver Front View

**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 connection.
- **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:** 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 of 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.

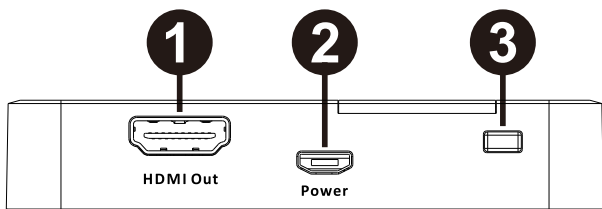
**Next Receiver Function:** When the button is short pressed on the transmitter side, the adapter will give up the current associated receiver and will connect to the next available receiver.

**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 that pressing the button on the transmitter side will always interrupt the current audio/video connection such that the

transmitter can search for another receiver, even if none are available. If only one receiver is available in the room, the transmitter will eventually return to its only receiver and reestablish a video connection with it after finishing its search.

### Receiver Rear Panel



1. **HDMI OUT:** This slot is where you connect to a 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 of 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 Rate (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	RGB4:4:4 (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 (1920x1080 & 2048x1080)	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)

### 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

