

WFH-140



User Manual

VER 1.2

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, lightning 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

This product is based on H.265 standard solution for transmitting one HD source signal to one HD display. It extends distance up to 330ft/100 meters (In an open environment without Wi-Fi interference) between the encoder and decoder via wireless transmission. It supports one-way IR control. It offers high quality configurable and low-bandwidth H.265 compression video. Input video resolution is up to 1920×1080@60Hz; Output video resolution is up to 1080P@60Hz. This wireless extender is designed special to transmit high definition video & audio within one environment.

2. Features

- ☆ HDMI 1.3, HDCP 1.4 and DVI 1.0 compliant
- ☆ Transmit one HDMI HD source signal to one HDMI HD display via wireless technology
- ☆ With one-way IR control
- ☆ Input video resolution is up to 1920×1080@60Hz YCbCr 4:4:4; Output video resolution is up to 1080P@60Hz YCbCr 4:4:4
- ☆ HDMI wireless transmission distance up to 330ft/100m. (In an open environment without Wi-Fi interference.)
- ☆ Supported HDMI audio formats:
Input: LPCM 2.0CH 32KHz/44.1KHz/48KHz/88.2KHz/96KHz/176.4KHz/192KHz
Output: LPCM 2.0CH 48KHz
- ☆ Adopt H.265 high performance codec technology
- ☆ End-to-end delay is less than 120Ms
- ☆ Compact design for easy and flexible installation.

3. Package Contents

Qty	Item
1	HDMI Wireless Extender (Encoder)
1	HDMI Wireless Extender (Decoder)
1	IR Blaster cable (1.5 meters)
1	20~60KHz IR Receiver cable (1.5 meters)
4	5G Wi-Fi Antenna
2	5V/2A Multinational Power Supply
1	User Manual

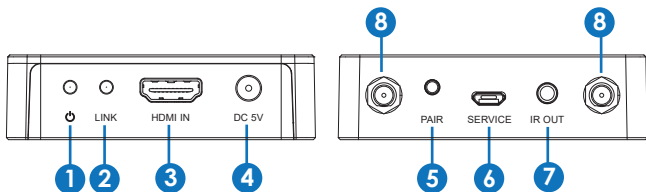
4. Specifications

Technical	
HDMI Compliance	HDMI 1.3
HDCP Compliance	HDCP 1.4
Video Bandwidth	4.95Gbps
Video Resolution	Input: Up to 1920×1080@60Hz Output: Up to 1080P@60Hz
Color Space	RGB, YCbCr 4:4:4 / 4:2:2
Color Depth	8/10/12-bit (1080P@60Hz)
HDMI Audio Formats	Input: LPCM 2.0CH 32KHz/44.1KHz/48KHz/ 88.2KHz/96KHz/176.4KHz/192KHz Output: LPCM 2.0CH 48KHz
ESD Protection	Human body model — ±8kV (Air-gap discharge) & ±4kV (Contact discharge)
Connection	
Encoder	Inputs: 1 x HDMI IN [Type A, 19-pin female] Outputs: 1 x IR OUT [3.5mm Stereo Mini-jack] 2 x Wi-Fi OUT [Wi-Fi antenna] Control: 1 x SERVICE [Micro USB, Update port]
Decoder	Inputs: 1 x IR IN [3.5mm Stereo Mini-jack] 2 x Wi-Fi IN [Wi-Fi antenna] Outputs: 1 x HDMI OUT [Type A, 19-pin female] Control: 1 x SERVICE [Micro USB, Update port]
Mechanical	
Housing	Plastic Enclosure
Color	Black
Dimensions	Encoder / Decoder: 76mm [W] x 98mm [D] x 21mm [H]
Weight	Encoder / Decoder: 100g
Power Supply	Input: AC100 - 240V 50/60Hz Output: DC 5V/2A
Power Consumption	Encoder: 3.5W, Decoder: 2.6W (Max)
Operating Temperature	32 - 104°F / 0 - 40°C

Storage Temperature	-4 - 140°F / -20 - 60°C
Relative Humidity	20 - 90% RH (no condensation)
Resolution / Cable Length	1080P60Hz - Feet / Meters
HDMI IN / OUT	42ft / 15M
The use of "Premium High Speed HDMI" cable is highly recommended.	

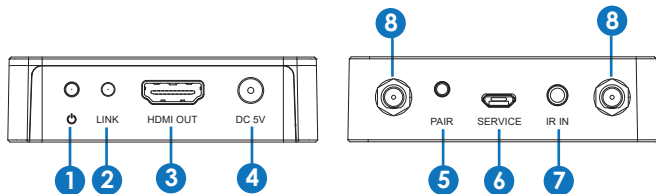
5. Operation Controls and Functions

5.1 Encoder Panel



No.	Name	Function Description
1	Power LED	The LED will illuminate red when the encoder is powered on.
2	LINK LED (Green)	The LINK LED flashing means that the encoder and decoder are paired successfully. (Please refer to "5.3 Pairing Instruction" for details)
3	HDMI IN	HDMI source input port for connecting the HDMI source device.
4	DC 5V	Connect the DC 5V/2A power adapter.
5	PAIR button	<ul style="list-style-type: none"> Press and hold the PAIR button, then power on the encoder, the encoder will enter the upgrade mode. Press and hold the PAIR button for 5 seconds after powering on the encoder, the encoder will restore factory settings, then it needs to pair with the decoder again.
6	SERVICE port	Firmware update port.
7	IR OUT	Connect the IR blaster cable. The IR blaster signal is from the IR IN port on the Decoder.
8	Antenna port	Connect the Wi-Fi antenna.

5.2 Decoder Panel



No.	Name	Function Description
1	Power LED	The LED will illuminate red when the decoder is powered on.
2	LINK LED (Green)	The LINK LED flashing means that the encoder and decoder are transmitting video signals. (Please refer to “5.3 Pairing Instruction” for details)
3	HDMI OUT	HDMI output port for connecting the HDMI display device.
4	DC 5V	Connect the DC 5V/2A power adapter.
5	PAIR button	<ul style="list-style-type: none">▪ Press and hold the PAIR button, then power on the decoder, the decoder will enter the upgrade mode.▪ Press and hold the PAIR button for 5 seconds after powering on the decoder, the decoder will restore factory settings.
6	SERVICE port	Firmware update port.
7	IR IN	Connect the IR receiver cable. The IR signal is sent to the IR OUT port on the encoder.
8	Antenna port	Connect the Wi-Fi antenna.

5.3 Pairing Instruction

Follow steps below to pair the encoder and decoder:

Step 1, Connect the encoder and decoder with an HDMI cable, as shown in the figure below.



Step 2, Power on the decoder, then the power LED and LINK LED of the decoder will be always on.

Step 3, Power on the encoder. After successful pairing, the LINK LED of the decoder will flash. (If the pairing fails, return to Step 2.)

If the LINK LED of encoder is always on, it indicates that the encoder and decoder has not been connected or paired. When there is video signal transmission, the LINK LED of decoder will flash; When there is no video signal transmission, the LINK LED of decoder will be always on.

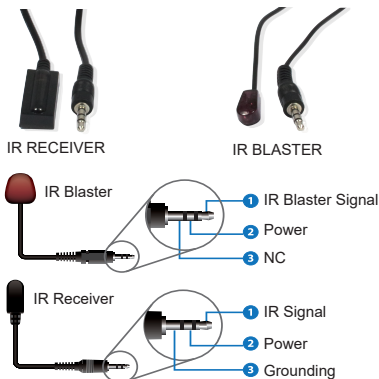
The specific instructions are shown in the following table.

Encoder's LINK LED status (Green)	Decoder's LINK LED status (Green)	Description
Always on	Always on	The encoder and decoder are not paired or connected.
Flash	Always on	Successful pairing.
Flash	Flash	The encoder and decoder are paired successfully, and there is video signal transmission.

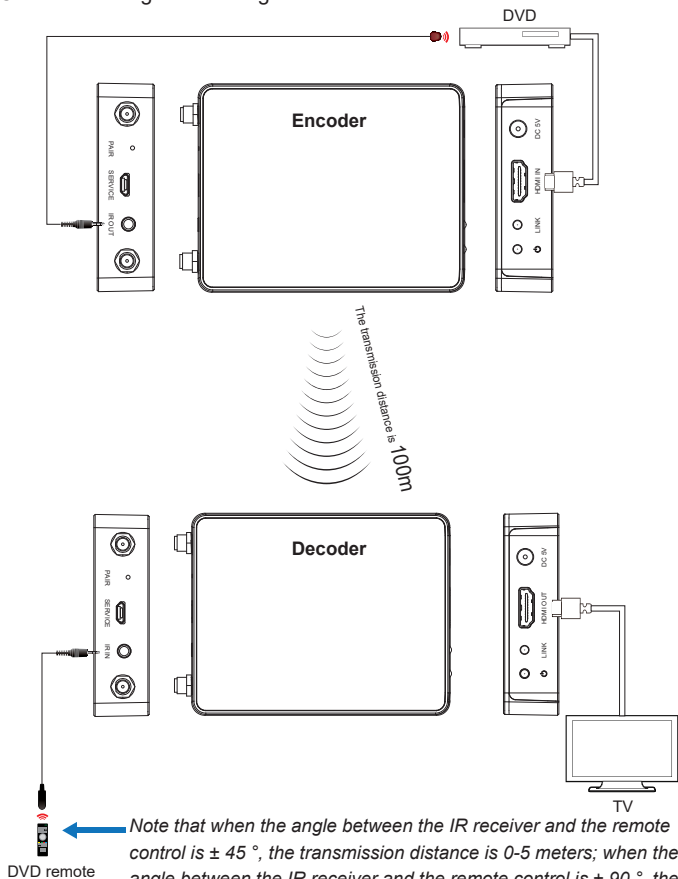
Note: After successful pairing, if the encoder restores factory settings, the encoder and decoder need to be re-paired.

5.4 IR Pin Definition

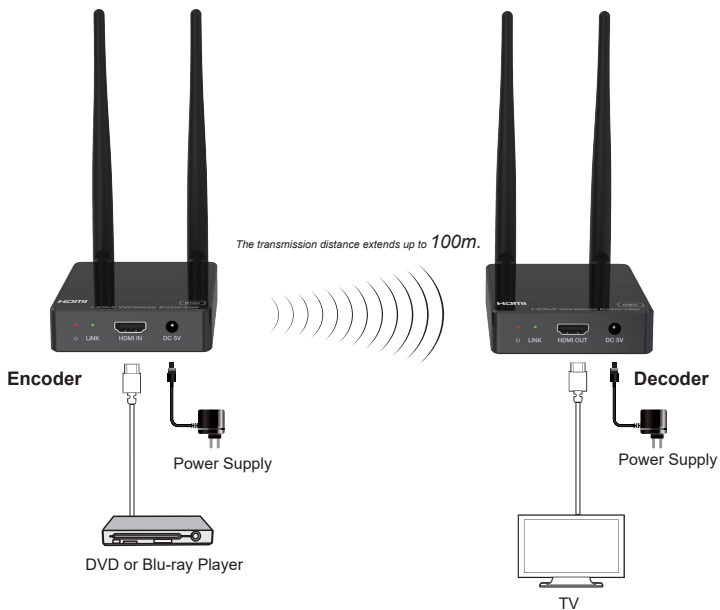
IR Receiver and Blaster pin's definition is as below:



Connection diagram of using IR cables.



6. Application Example



HDMI™
HIGH-DEFINITION MULTIMEDIA INTERFACE

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