

# BG-EXH-70WP-W

HDBaseT Wall Plate Transmitter & HDBaseT to HDMI Receiver

## User Manual







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## Statement

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Please read these instructions carefully before connecting, operating, or configuring this product. Please save this manual for future reference.

## Safety Precaution

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- To prevent damaging this product, avoid heavy pressure, strong vibration, or immersion during transportation, storage, and installation.
- The housing of this product is made of organic materials. Do not expose to any liquid, gas, or solids which may corrode the shell.
- Do not expose the product to rain or moisture.
- To prevent the risk of electric shock, do not open the case. Installation and maintenance should only be carried out by qualified technicians.
- Do not use the product beyond the specified temperature, humidity, or power supply specifications.
- This product does not contain parts that can be maintained or repaired by users. Damage caused by dismantling the product without authorization from BZBGear is not covered under the warranty policy.
- Installation and use of this product must strictly comply with local electrical safety standards.

## Surge protection device recommended

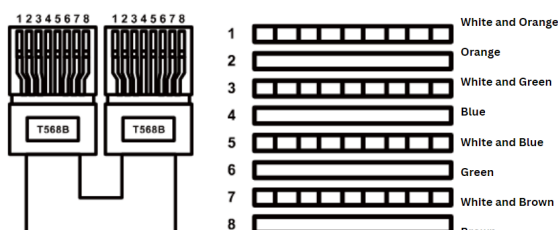
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This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shocks, lightning strikes, etc. Use of surge protection systems is highly recommended to protect and extend the life of your equipment.

## Caution

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The product requires the use of UTP connectors. Please connect in the direct interconnection method and do not cross-connect.





## Introduction

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Introducing the BG-EXH-70WP-W HDBaseT Wall Plate Kit, featuring a sophisticated HDBaseT Wall-plate Transmitter and an HDBaseT to HDMI Receiver, designed to elevate your AV experience with seamless signal transmission and exceptional performance.

The transmitter boasts HDMI 2.0b compliance and HDCP 2.2 compatibility, ensuring seamless connectivity and support for high-definition content. With support for resolutions up to 4K2K@60Hz (4:4:4), 4K2K@30Hz, and 1080p@120Hz, it delivers stunning visual clarity and fidelity, making it perfect for a wide range of applications.

## Features

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- HDMI 2.0b 18Gbps, HDCP 2.2 compliant
- Supports resolutions up to 4K2K@60Hz (4:4:4), 4K2K@30Hz, and 1080p@120Hz
- Capable of transmitting up to 7.1 channels of HD audio
- Utilizes HDBaseT™ technology over a single CAT 6/6a/7 cable, extending up to 230ft/70m
- Features one HDMI input and fits a 1-Gang US Decora Wall Plate
- Supports two-way IR and RS-232 communication
- Incorporates POC (Power Over Cable) function: Either the transmitter (TX) or receiver (RX) is powered by a 24V1A power supply, eliminating the need for power from the DC jack for the other device. POC power consumption is less than 10W.
- Transfers bidirectional infrared control signals alongside the HDMI signal (See description 1).
- Transfers bidirectional RS-232 control signals alongside the HDMI signal (See description 2).

## Packing List

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- 1× 18Gbps HDMI Wall Plate Transmitter
- 1× HDBaseT to HDMI receiver
- 2× Phoenix connectors (3 pins)
- 2× Phoenix connectors (2 pins)
- 1× User Manual



## Specifications

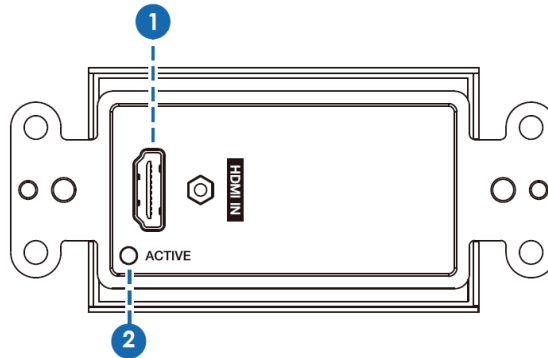
Technical	
HDMI Compliance	HDMI 2.0b
HDCP Compliance	HDCP 1.4 and HDCP 2.2
Video Bandwidth	18Gbps
Video Resolution	Up to 4K2K@50/60Hz (YUV4:4:4), 4K2K@30Hz, 1080P@120Hz, and 1080P 3D@60Hz
Color Space	RGB/YCbCr 4:4:4, YCbCr 4:2:2
Color Depth	10-bit, 12-bit
HDMI Audio Formats	LPCM 2/5.1/7.1CH, Dolby Digital, DTS 5.1, Dolby Digital+, Dolby TrueHD, DTS-HD Master Audio, Dolby Atmos, DTS:X
Optical Audio Formats	LPCM 2CH, LPCM 5.1, Dolby Digital 2/5.1CH, DTS 2/5.1CH
ESD Protection	Human body model—±8kV (Air-gap discharge) & ±4kV(Contact discharge)
Connections	
Transmitter	Inputs: 1x HDMI Type A [19-pin female] 1x IR INPUT [Phoenix jack] 1x RS-232 [Phoenix jack] Outputs: 1x HDBaseT OUT [RJ45] 1x IR OUTPUT [Phoenix jack] 1x RS-232 [Phoenix jack]
Receiver	Input: 1x HDBaseT IN [RJ45, 8-pin female] Output: 1x HDMI OUT [Type A, 19-pin female] Controls: 1x IR in, 1x IR out, 1x RS-232 serial port
Mechanical	
Housing	Plastic-Front Panel, Metal-Rear Case
Color	White-Front Panel, Black-Rear Case
Dimensions (W x D x H)	Wall plate: 4.1in x 1.8in x 1.2in [103.5mm x 46mm x 30mm] Receiver: 4.6in x 2.6in x 0.71in [117mm x 66mm x 18mm]
Weight	Wall plate: 5.75 oz [163g], Receiver: 7.1 oz [201g]
Power Supply	Input: AC100 - 240V 50/60Hz, Output: DC 24V/1A (US/EU standards, CE/FCC/UL certified)
Power Consumption	9W (Max)
Operating Temperature	32 - 104°F / 0 - 40°C
Storage Temperature	-4 - 140°F / -20 - 60°C
Relative Humidity	20 - 90% RH (no condensation)



# Operation Controls and Functions

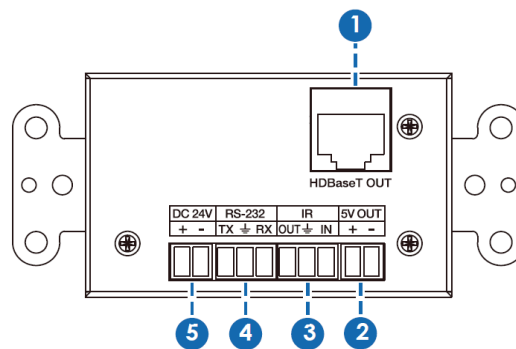
## Front and Rear Panel

### Transmitter Front Panel



No.	Name	Function Description
1	HDMI IN port	HDMI signal input port, connected to HDMI source device, such as Blu-ray or PS4 player.
2	ACTIVE LED	When there is signal input, the green LED lights on.

### Transmitter Rear Panel

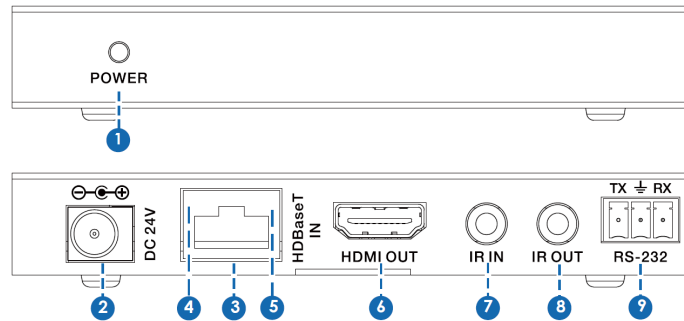


No.	Name	Function Description
1	HDBaseT OUT	HDBaseT output port, connected to the HDBaseT IN port of Receiver with a CAT6/6a/7 cable.
2	5V OUT	Supply 5V power for external IR receiver.
3	IR IN/OUT	Use the phoenix jack for connect IR input or output.



4	RS-232	RS-232 serial port, connected to PC or control system for RS-232 control commands transmission.
5	DC 24V	Use the phoenix jack for connect power supply.

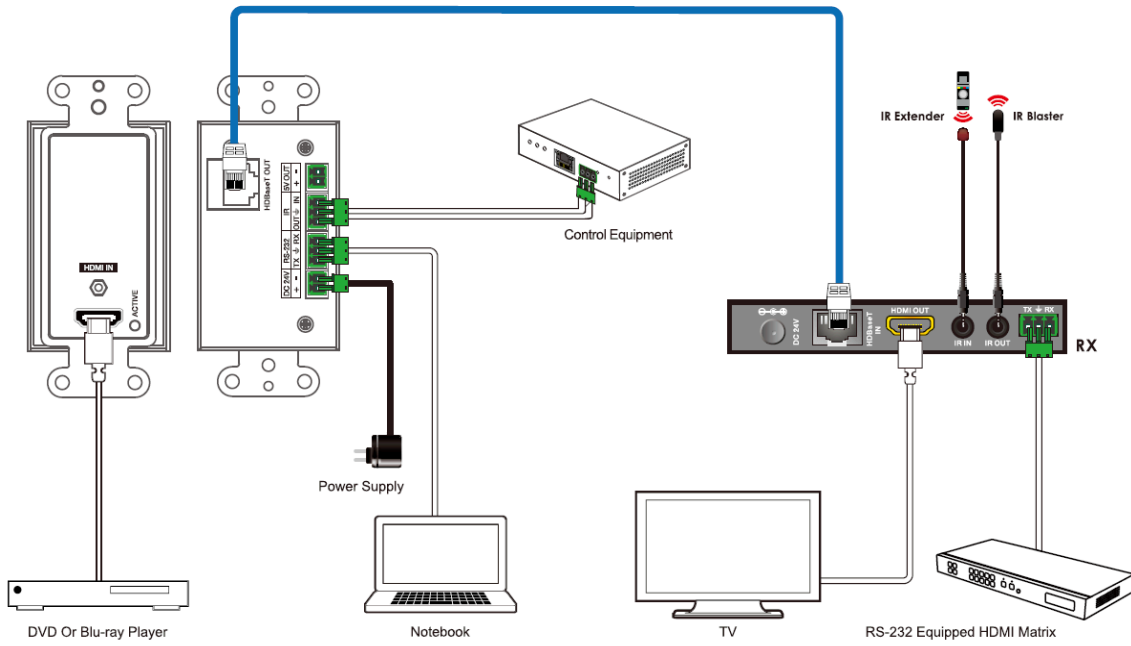
### Receiver Panel



No.	Name	Function Description
1	POWER LED	When the product is powered on, the POWER LED will light on.
2	DC 24V port	DC 24V power supply input port.
3	HDBaseT IN port	HDBaseT input port, connected to the HDBaseT OUT port of Transmitter with a CAT6/6a/7 cable.
4	Link Signal Indicator (Green)	<ul style="list-style-type: none"> <li>Light on: Transmitter and Receiver are in good connection status.</li> <li>Light flashing: Transmitter and Receiver are in poor connection status.</li> <li>Light off: Transmitter and Receiver are not connected.</li> </ul>
5	Data Signal Indicator (Yellow)	<ul style="list-style-type: none"> <li>Light on: There is HDMI signal transmission with HDCP encryption.</li> <li>Light flashing: There is HDMI signal transmission without HDCP encryption.</li> <li>Light off: There is no HDMI signal transmission.</li> </ul>
6	HDMI OUT port	HDMI signal output port, connected to HDMI display device, such as TV or monitor.
7	IR IN	IR signal input port, connected with IR Receiver cable.
8	IR OUT	IR signal output port, connected with IR Blaster cable.
9	RS-232	RS-232 serial port, connected to PC or control system for RS-232 control commands transmission.



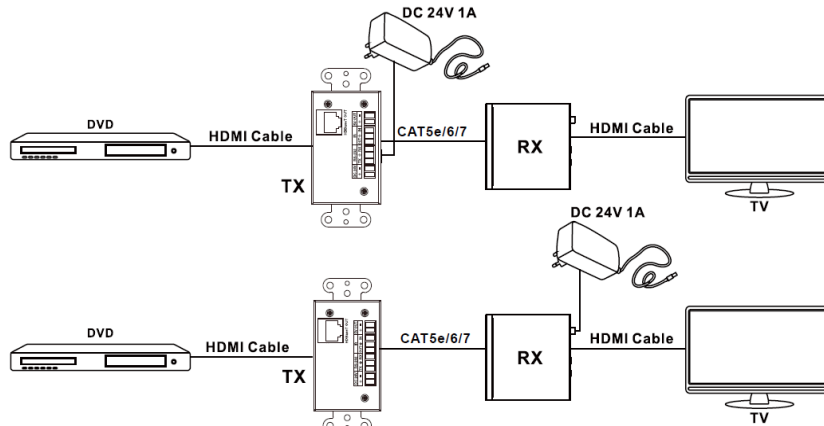
## Connection Diagram



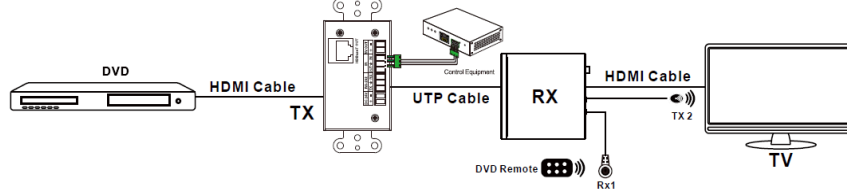


## Connection Examples

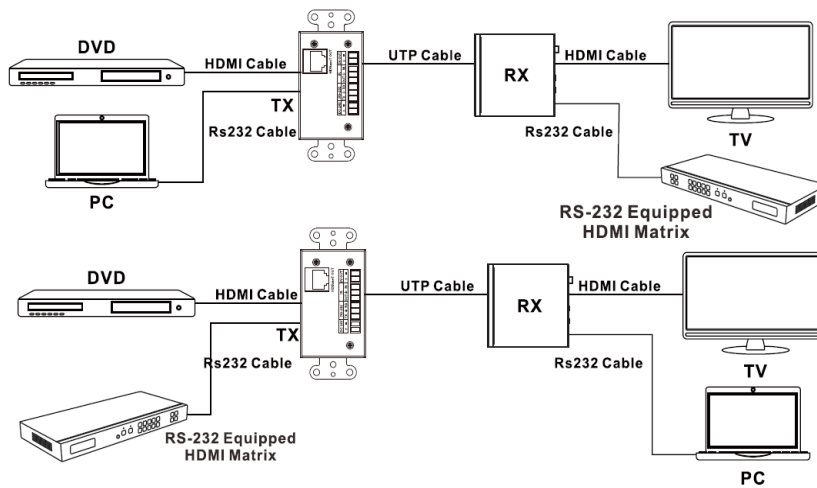
※ Description 1  
POC (Power over Cable) Application Example



※ Description 2  
Bidirectional Infrared control Application Example



※ Description 3  
Bidirectional RS-232 control Application Example





## Troubleshooting

Problems	Causes	Solutions
No Power / All LED off	Power supply not connected, connected fully, or wrong power supply.	Check if the power supply is connected correctly and the output voltage value is within recommended specifications.
No sound or sound issues	The HDMI connection is faulty, the audio format is not supported by the displays, or the source player is set to another port for audio output	Check if the HDMI cables are connected correctly. Check if the audio format is supported by the display and that a user has not changed the supported audio format on the player's audio output. Ensure output settings from the HDMI source device as set correctly.
No picture or picture flickers	The HDMI cable may be faulty or the category cable quality is faulty.	Check if the HDMI and category cable connections are correct and undamaged. Change to another good working HDMI cable or category cable (CAT6 or better cable is recommended).
Electrical Issues	See page 4	



## Tech Support

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Have technical questions? We may have answered them already!

Please visit BZBGear's support page ([bzbgear.com/support](https://bzbgear.com/support)) for helpful information and tips regarding our products. Here you will find our Knowledge Base ([bzbgear.com/knowledge-base](https://bzbgear.com/knowledge-base)) with detailed tutorials, quick start guides, and step-by-step troubleshooting instructions. Or explore our YouTube channel, BZB TV ([youtube.com/c/BZBTVchannel](https://youtube.com/c/BZBTVchannel)), for help setting up, configuring, and other helpful how-to videos about our gear.

Need more in-depth support? Connect with one of our technical specialists directly:

<b>Phone</b>	<b>Email</b>	<b>Live Chat</b>
1.888.499.9906	<a href="mailto:support@bzbgear.com">support@bzbgear.com</a>	<a href="https://bzbgear.com">bzbgear.com</a>

## Limited Product Warranty Terms

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Pro Line: 5-year warranty from the date of purchase for AV/Broadcasting products bought on or after August 1, 2024.

Essential Line: 3-year warranty from the date of purchase for AV/Broadcasting products bought on or after August 1, 2024.

Cables: Lifetime Limited Product Warranty.

For complete warranty information, please visit [bzbgear.com/warranty](https://bzbgear.com/warranty).

For questions, please call 1.888.499.9906 or email [support@bzbgear.com](mailto:support@bzbgear.com).

## Mission Statement

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BZBGear is a breakthrough manufacturer of high-quality, innovative audiovisual equipment ranging from AVoIP, professional broadcasting, conferencing, home theater, to live streaming solutions. We pride ourselves on unparalleled customer support and services. Our team offers system design consultation, and highly reviewed technical support for all the products in our catalog. BZBGear delivers quality products designed with users in mind.

## Copyright

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