

# BG-EXH-70C

**4K 18Gbps UHD HDMI Extender Over Category 5e/6/7 Cable up to  
230 ft also with 2-Way IR & Audio Extraction**

## 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 Precautions

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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.
- Unplug this device during lightning storms
- Clean only with a soft dry microfiber cloth.
- 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.
- Only use accessories specified by the manufacture
- Product specifications may be subject to technical upgrades without further notice



## Introduction

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The BG-EXH-70 HDMI extender includes a transmitter unit and a receiver unit which allows 4K HDMI signals to be transmitted up to 70m (230ft) using a CAT6/6A/7 network cable. It is perfect for outdoor advertising, monitoring systems, home entertainment, conference room applications, and much more!

## Features

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- Low latency.
- A 4K@60Hz HDMI signal can be transmitted 70 meters (230ft) through CAT6/6A/7 network cables.
- The receiving unit can extract the digital audio from the transmitter or ARC through the S/PDIF port.
- Audio Formats: Dolby TrueHD 7.1CH/Dolby Digital 5.1CH
- HDR(YUV 4:4:4), EDID pass back.
- Transmitter with HDMI loop out.
- Bi-directional IR pass back (20 ~ 60KHz).
- Build-in Lightning Protection, Surge Protection, ESD Protection.

## Packing List

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- |                                 |                            |
|---------------------------------|----------------------------|
| • 1 x HDMI Extender Transmitter | • 2 x 5V2A DC Power Supply |
| • 1 x HDMI Extender Receiver    | • 8 x Mounting brackets    |
| • 1 x User Manual               | • 18 x Screws              |
| • 1 x Wideband IR TX            | • 1x User Manual           |
| • 1 x Wideband IR RX            | • 1x Quick Start Guide     |



## Technical Specifications

Technical	Transmitter	Receiver
HDMI compliance	HDMI 2.0, compatible HDMI1.4	
HDCP compliance	HDCP2.2, compatible HDCP1.4	
Transmission medium	CAT6/CAT6A/CAT7	
Transmission distance	CAT6/6A/7 Transmission 70 meters	
Video bandwidth	18Gbps	
Resolution support	480i@60Hz, 480p@60Hz, 576i@50Hz, 576p@50Hz, 720p@50/60Hz, 1080i@50/60Hz, 1080p@50/60Hz, 3840x2160@24/25/30/50/60Hz, 4096x2160@24/25Hz, 1280x960, 1280x800, 1280x768, 1680x1050, 1360x768, 1366x768, 1600x900, 1024x768, 800x600	
Audio support	LPCM/DTS-HD/DTS-Audio/Dolby Digital 5.1CH/Dolby TrueHD 7.1CH	
HDR10 (YUV 4:4:4)	supported	
HDMI Loop-out	supported	
ARC and S/PDIF out	supported	
EDID pass through	supported	
Bi-directional IR passback	supported	
Input TMDS signal	0.7~1.2Vp-p	
Input DDC signal	5Vp-p	
Input	HDMI x1, DC2.1 x1, 3.5mm jack x1 (IR)	DC2.1 x1, RJ45 x1, 3.5mm jack x1 (IR)
Output	HDMI x1, RJ45 x1, 3.5mm jack x1 (IR)	HDMI x1, RJ45 x1, 3.5mm jack x1 (IR), Optical x1
HDMI connector	Type A 19 Pins, Female	
Network cable standard	CAT6/CAT6A/CAT7, follow IEEE-5688 standard	
Mechanical	Transmitter	Receiver
Housing	Aluminum alloy material+crystal panel	
Dimensions (LxWxH mm)	4.2"(L) x 3.9"(W) x 1.0"(H) [106.0(L) x 99.0(W) x 26.2(H)mm]	
Net weight	0.46lbs [210g]	0.46lbs [210g]
Power supply	5V/2A	5V/2A
Power consumption	4W	4W
Operation temperature	-4~140°F / -20~60°C	
Storage temperature	-22~158°F / -30~70°C	
Relative humidity	0~90% (no condensation)	



## Operation Controls and Functions



### Transmitter Panel

1. **Reset button:** Press to restart the device.
2. **RJ45 signal output:** Connect with a network cable to the receiver.
3. **Power/Signal indicator:** When power is connected and there is no HDMI signal, the indicator will flash, when there is HDMI signal, the indicator will light solid blue.
4. **DC5V input:** Connect with DC5V/2A power adapter.
5. **HDMI output:** Connect with an HDMI display device.
6. **HDMI input:** Connect with the source device.
7. **IR in:** Connect with IR receiver extension cable.
8. **IR out:** Connect with IR blaster extension cable.

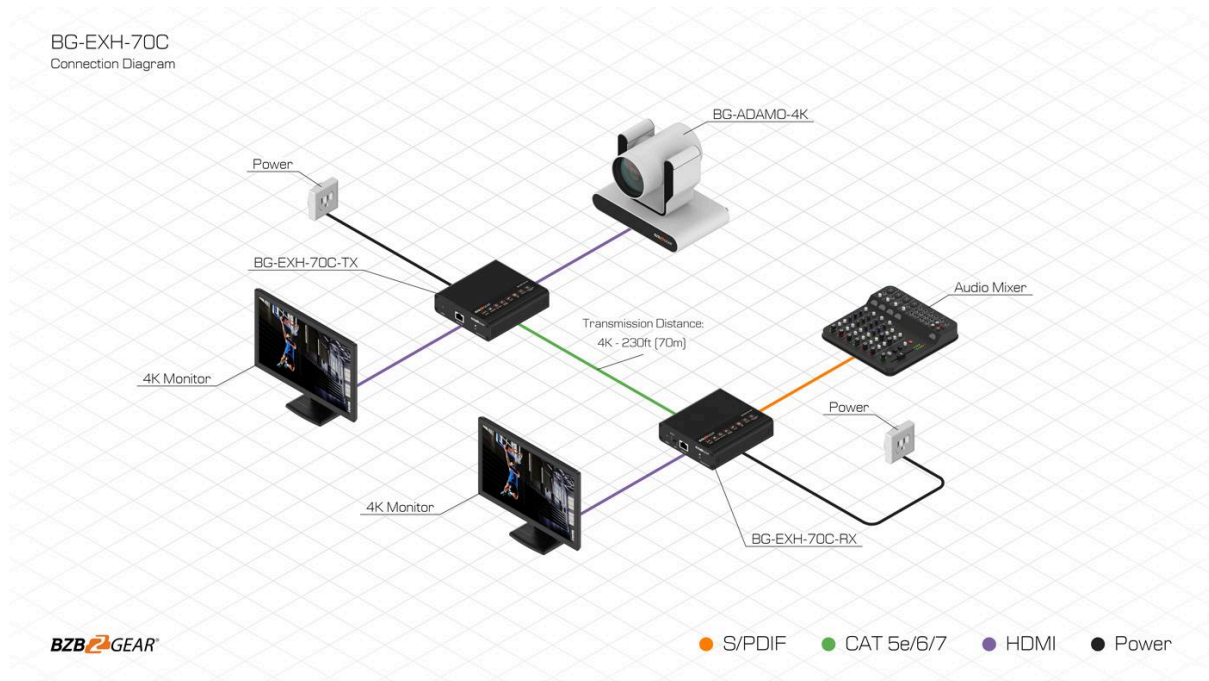
### Receiver Panel

9. **Reset button:** Press to restart the device.
10. **Audio switch:** Choose to extract audio from HDMI or ARC to the S/PDIF port.
11. **Rj45 signal input:** Connect with network cable.
12. **Power/Signal indicator:** When there is power and no HDMI signal, the indicator will flash, when there is HDMI signal, the indicator will light solid blue.
13. **DC5V input:** Connect with DC5V/2A power adapter.
14. **S/PDIF out:** Output digital audio signal.
15. **HDMI output:** Connect with an HDMI display device.
16. **IR in:** Connect with IR receiver extension cable.
17. **IR out:** Connect with IR blaster extension cable.



## Installation Procedures

### 1. Connection



### 2. Connection instruction

- 1) Connect the source device to the HDMI in port of the transmitter with an HDMI cable, and connect the HDMI out port of the receiver to the display device with another HDMI cable.
- 2) Connect the CAT out port of the transmitter and the CAT in port of the receiver via a network cable (CAT6/CAT6A/CAT7).
- 3) If using HDMI loop out, connect the display device to the HDMI OUT port of the transmitter.
- 4) Plug the power supply into the device to get started.

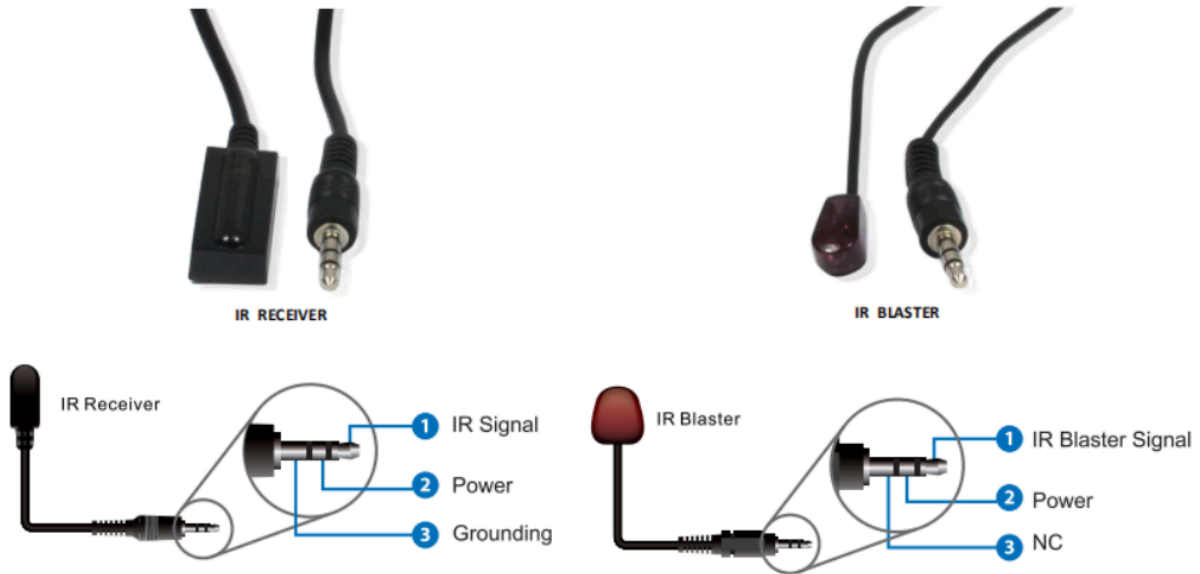
**[NOTE]:** It is recommended to use a length range within 2~70m network cable. If the cable is too short, there may be no display output because the signal is too strong. If the cable is too long, the output may be poor quality.





## IR Cable Pin Assignment

IR Receiver and Blaster pin's definition as below:

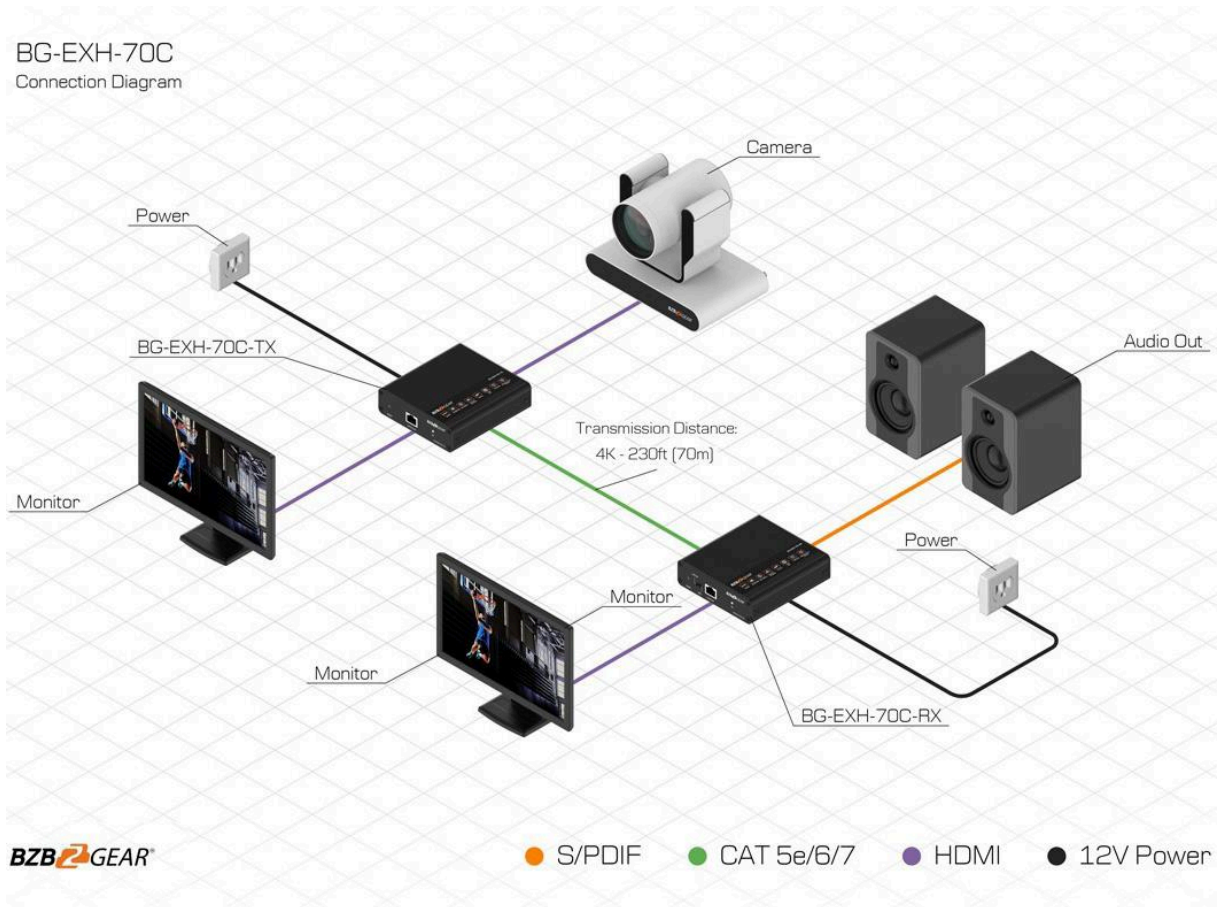


### IR User Guide

1. IR blaster extension cable should plug in the IR OUT port of the transmitter and receiver, IR receiver extension cable should plug in the IR IN port of the transmitter and receiver.
2. The emitter of the IR blaster extension cable should be as close as possible to the IR receiving window of the source device.
3. Face the receiving head of the IR receiver extension cable to the user for convenient remote control.



## Application Example





## 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:

<u>Phone</u>	<u>Email</u>	<u>Live Chat</u>
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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